F. E. KULLANDER.

NEST FOR HENS.

APPLICATION FILED OCT. 16, 1909.

953,172. Patented Mar. 29, 1910.

Fig. 1

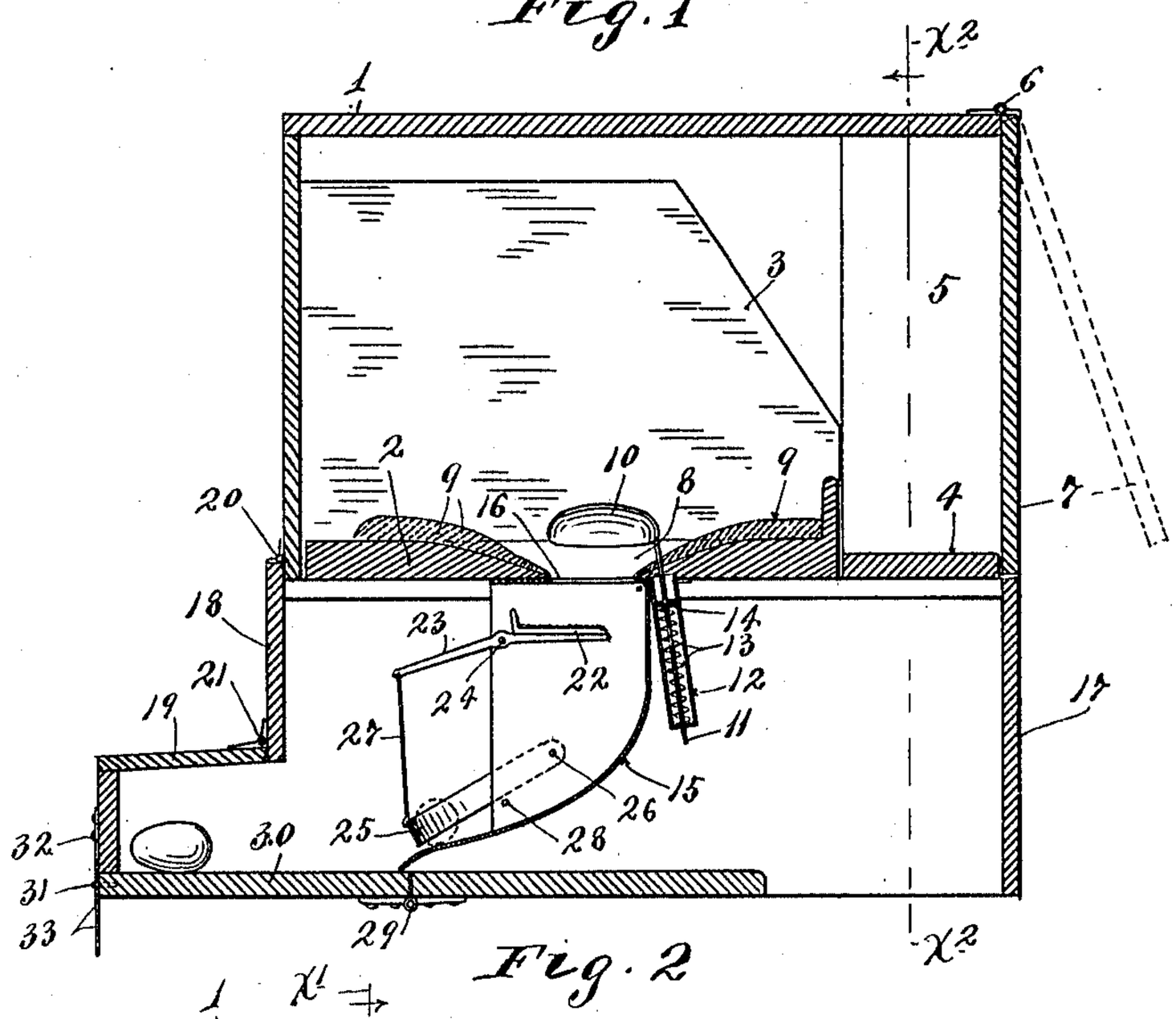


Fig. 2

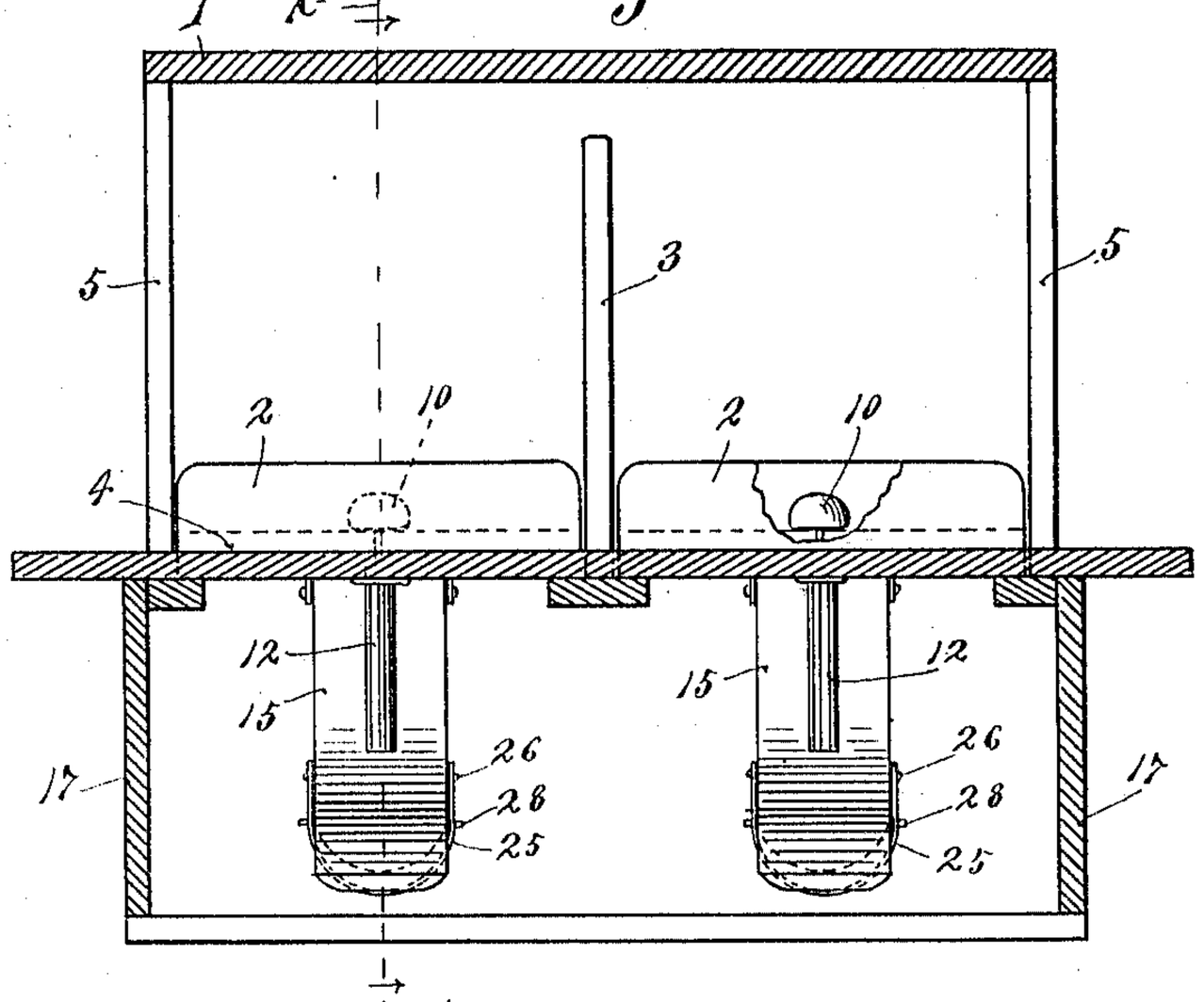
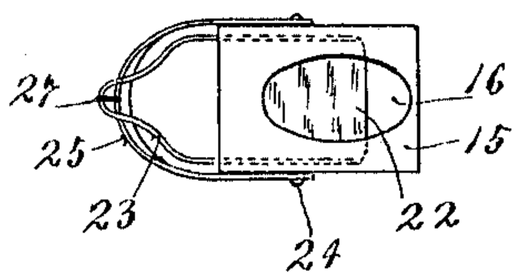


Fig. 3



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UNITED STATES PATENT OFFICE.

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NEST FOR HENS.

953,172. Specification of Letters Patent. **Patented Mar. 29, 1910.**

Application filed October 16, 1909. Serial No. 523,041.

To all whom it may concern:

Be it known that I, FRANS ERIK KULLANDER, a subject of the King of Sweden, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Nests for Hens; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has for its especial object to provide an improved nest box for hens and, to this end, it consists of the novel devices and combinations of devices hereinafter described and defined in the claims.

In the accompanying drawings, which illustrate the invention, like characters indicate like parts throughout the several views.

Referring to the drawings, Figure 1 is a vertical section taken on the line x^1 x^1 of Fig. 2; Fig. 2 is a vertical section taken on the line x^2 x^2 of Fig. 1, with some parts broken away; and Fig. 3 is a plan view of the discharge spout removed from working position.

The numeral 1 indicates a case provided, as shown, with two nest bottoms 2, separated one from the other by a partition 3. As is evident, the case 1 may be made of any desirable length in order to accommodate the required number of nests. In front of the nest bottoms 2, the case is provided with a passage way 4, which extends completely through the case 1 and the floor thereof extends beyond the sides of the case 1. At each end of the passage way 4, the sides of the case 1 are cut away at 5 to afford suitable openings through which the hens may pass in going to and from the nests. The entire side of the case 1, in front of the nests, is hinged at 6 to the top of the case 1, to afford a door 7. The door 7 hangs in a closed position under the action of gravity and, by opening the door 7, access may be had to the interior of the case 1, for the purpose of cleaning the same out.

A discharge orifice 8 is formed in the central portion of each nest bottom 2 and a nest 9, made of any suitable material, is formed around the discharge orifice 8 and secured to the nest bottom 2 by any suitable means, not shown. The discharge orifice 8 is normally open and is adapted to be closed by a horizontally extended egg-shaped stopper 10 which serves also as a nest egg. The stopper 10 has secured to the under side and at one end thereof, a depending stem 11, which stem projects at a slight angle to the bottom of the stopper 10, the purpose of which will presently appear. The upper end of the stem 11 works through an opening in the nest bottom 2, in front of the discharge orifice 8, and is guided thereby for vertical movement. The stem 11, at its lower end, works within and through the bottom of a depending casing 12, which casing is secured to the under side of the nest bottom 2. A light coiled spring 13 is mounted in the casing 12 and is compressed between a collar 14, secured to the stem 11 and the bottom of the casing 12, and normally and yieldingly holds the stopper 10 in an elevated position, directly above the discharge orifice 8.

Secured to the under side of each nest bottom 2 is a discharge spout 15, provided with an opening 16 in its upper end, which opening registers with the discharge orifice 8. The bottom of the discharge spout 15 is curved and is arranged to deliver into a catch box or receptacle 17, secured to the under side of the case 1. The catch box 17 extends beyond the rear portion of the case 1 and is provided with horizontal and vertical door sections 18 and 19. The vertical door section is hinged at 20 to the case 1 and the horizontal door section 19 is hinged at 21 to the vertical door section 18. As is evident, these door sections 18 and 19 permit access to the interior of the catch box 17, for the purpose of gathering the eggs deposited therein. A horizontally extended trip plate 22, having a rearwardly extended lever 23, is pivotally mounted with the discharge spout 15 and below the discharge orifice 8, on a small hinge rod 24, which rod is secured at its ends to the side of the discharge spout 15. An intercepting bar 25, in the form of a bail, is pivotally secured at its ends, by rivets 26, to the sides of the discharge spout 15. The intercepting bar 25 is connected, at its intermediate portion, to the free end of the lever 23, by a pivotally connected link 27. Stops 28 project outward from the sides of the delivery spout 15 to limit the downward movement of the intercepting bar 25.

For the purpose of positively carrying the eggs deposited in the catch box 17 beyond the delivery end of the spout 15, that portion of the bottom of the catch box 17, which

extends from the lower end of the spout 15 to the rear end portion of the catch box 17, is hinged at 29 to afford a hinged section 30. The section 30, at its free end, is adjustably secured to the rear wall of the catch box 17 by means of a projecting pin 31, secured to the section 30 and a spring finger 32 rigidly secured to the rear wall of the catch box 17 and depending below the lower edge thereof. The free end of the spring finger 32 is provided with a series of holes 33, through which the pin 31 may project for the purpose of holding the section 30 in different positions.

The operation of the device may be briefly stated as follows: When the hen is in the nest, her weight will force the stopper 10 down against the tension of the spring 13 and thereby close the orifice 8. When the hen leaves the nest, the spring 13 will return the stopper 10 to its normal or elevated position. The first egg deposited in the nest will roll toward the center of the nest and its weight will cause the stopper 10 to swing to one side and allow the egg to drop through the orifice 8, and as soon as the egg is out of contact with the stopper 10, the stopper will return to its normal position under the action of gravity. The deposited egg, upon dropping through the orifice 8, will first strike the trip plate 22 and roll down the spout 15 until it is stopped by the intercepting bar 25, as indicated by the dotted lines. The second egg, upon dropping through the discharge orifice 8, will strike the trip plate 22 and thereby, through the different connections, release the first deposited egg held by the intercepting bar 25, and the second egg, in turn, will roll down the spout 15 and will be stopped by the intercepting bar until released by the next deposited egg in the nest. The eggs, as they are released from the intercepting bar 25, will roll upon the section 30, where they may be gathered from time to time without disturbing the hens.

The above device, while simple and at a comparatively small cost, has been found highly efficient in actual practice for the purpose had in view.

What I claim is:

1. The combination with a nest bottom having a discharge orifice, of an egg receptacle located below said nest bottom and a stopper arranged to close said discharge orifice when the hen is on the nest and to automatically open said discharge orifice when the hen is off the nest, substantially as described.

2. The combination with a nest bottom having a discharge orifice, of an egg receptacle located below said nest bottom and a normally upwardly spring-pressed stopper arranged to close said discharge orifice when the hen is on the nest and to automatically open said discharge orifice when the hen is off the nest, substantially as described.

3. The combination with a nest bottom having a discharge orifice, of an egg receptacle located below said nest bottom and a normally upwardly spring-pressed stopper loosely mounted for lateral swinging movement and arranged to close said discharge orifice when the hen is on the nest and to automatically open said discharge orifice when the hen is off the nest, substantially as described.

4. The combination with a nest box having a discharge orifice in its bottom, of an egg receptacle located below said nest box, a stopper arranged to close said discharge orifice when the hen is on the nest and to automatically open said discharge orifice when the hen is off the nest and a discharge spout leading from the discharge orifice to the egg receptacle, substantially as described.

5. The combination with a nest box having a discharge orifice in its bottom, of an egg receptacle located below said nest box, a normally upwardly spring-pressed stopper arranged to close said discharge orifice when the hen is on the nest and to automatically open said discharge orifice when the hen is off the nest, a discharge spout leading from the discharge orifice to the egg receptacle, an intercepting device located in said discharge spout, and a trip located between the discharge orifice and the intercepting device and arranged, when struck by the last dropped egg, to operate said intercepting device to release the egg held thereby, substantially as described.

6. The combination with a nest box having a discharge orifice in its bottom, of an egg receptacle located below said nest box, a normally upwardly spring-pressed stopper arranged to close said discharge orifice when the hen is on the nest and to automatically open said discharge orifice when the hen is off the nest, a discharge spout leading from the discharge orifice to the egg receptacle, a bail-like intercepting device pivotally secured to said discharge spout, a trip plate pivotally mounted in said discharge spout between the discharge orifice and intercepting device, a lever secured to said trip plate, and a link connecting said lever and intercepting device, substantially as described.

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

FRANS ERIK KULLANDER.

Witnesses:

ALICE V. SWANSON,

HARRY D. KILGORE.