



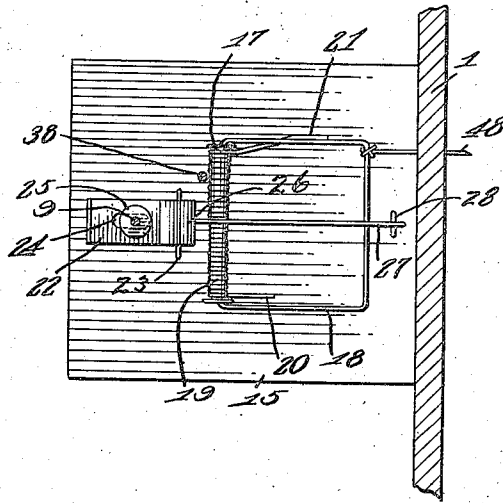
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O. P. MORRISON.  
INCUBATOR ATTACHMENT.  
FILED AUG. 3, 1922.

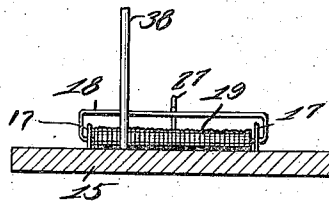
1,440,743.

2 SHEETS—SHEET 2.

*Fig. 2.*



*Fig. 3.*



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By *Carroll*  
Attorney

# UNITED STATES PATENT OFFICE.

OSCAR P. MORRISON, OF GOMEZ, TEXAS.

## INCUBATOR ATTACHMENT.

Application filed August 3, 1922. Serial No. 579,539.

*To all whom it may concern:*

Be it known that I, OSCAR P. MORRISON, a citizen of the United States, residing at Gomez, in the county of Terry and State of Texas, have invented a new and useful Incubator Attachment, of which the following is a specification.

This invention aims to provide a simple means whereby, when the temperature rises or falls beyond predetermined limits, in an incubator, a signal will be sounded thereby to admonish an attendant that the incubator needs attention.

In the drawings:—

Figure 1 shows in vertical section, a device constructed in accordance with the invention, parts being in elevation; Figure 2 is a section on the line 2—2 of Figure 1; Figure 3 is a section on the line 3—3 of Figure 1.

The device forming the subject matter of this application is adapted to be used on incubators of widely different sorts, but by way of illustration, there is depicted in the drawings a portion of the frame 1 of an incubator, the incubator being heated by any suitable means, such as a flue 2 having a lateral branch 3 discharging into the incubator. The flow of air through the flue 2 may be under the control of a damper 4, pivotally supported at 5 on a lever 6, fulcrumed intermediate its ends at 7 on the frame 1, and carrying an adjustable counterweight 8. The numeral 9 marks a thermostatically operated member such as a rod, pivoted at 10 to the lever 6 and connected at its lower end to a thermostat 11 mounted on a bracket 12 or otherwise.

In carrying out the invention, a pair of supports 14 and 15 are mounted on the frame 1 of the incubator, both the upper support 14 and the lower support 15 being provided with openings 16 wherein the rod 9 slides freely. The lower support 15 is supplied with bearings 17. The numeral 18 marks a loop-shaped arm, the ends of which are mounted pivotally in the bearings 17. A torsion spring 19 is disposed between the bearings 17 and is mounted on the aforesaid ends of the arm 18, one end 20 of the spring bearing on the support 15, and the other end 21 of the spring engaging one side portion of the arm 18, the function of the spring being to swing the arm in the direction of the arrow A in Figure 1. A trigger 22 is pivotally mounted at 23 on the support 15 and has an

opening 24, through which the rod 9 passes slidably, the rod being provided with a projection 25 adapted to engage the trigger, when the rod moves downwardly beyond a predetermined point. The trigger 22 is provided at its inner end with a finger 26. A detent 27 is pivotally mounted at 28 on the support 15.

The upper support 14 is provided with a mechanism duplicating that described in connection with the lower support 15, and the mechanism on the support 14 may be dismissed with a brief catalogue of parts, the said mechanism including a trigger 29 mounted pivotally at 30 on the support 14 and having an opening 31 for the passage of the rod 9, the projection on the rod being marked by the numeral 32 and the finger of the trigger appearing at 33. The detent is denoted by the numeral 34 and is mounted pivotally at 35 on the support 14. The spring-actuated, loop-shaped arm is designated by the numeral 36 and the bearings which carry the arm for swinging movement are denoted by the numeral 37. The arm 36, when set free, tends to swing in the direction of the arrow B in Figure 1, and the projection 32 on the rod 9 cooperates with the trigger 29 when the rod 9 moves upwardly beyond a predetermined point. In order to prevent the arm 36 from swinging, in the direction of the arrow A against the rod 9, and in order to prevent the arm 36 from swinging in the direction of the arrow B against the rod 9, a stop is provided, the same being, if desired, in the form of a rod 38, mounted on the supports 14 and 15, and extended therebetween.

A signal of any desired sort is located at a point remote from the incubator 1 and may be disposed in the bed room or office of an attendant. The signal may take the form of a spring-actuated alarm 39 supported at 40 and including a gong 41 adapted to be engaged by a striker 42, the winding button being marked by the numeral 43. The alarm is held set through the instrumentality of a pawl 44 pivoted at 45 on the casing 46 of the alarm and adapted to cooperate with a ratchet wheel 47, constituting a part of the alarm mechanism.

Connections 48 and 49 are provided, the same ordinarily being in the form of flexible elements, having their upper ends mounted on the pawl 44. Intermediate

their ends, the connections 48 and 49 pass slidably over fairleaders 50 on the frame 1 of the incubator, the connections passing inside of the frame. The inner end of the connection 49 is secured to the intermediate portion of the arm 36, whereas the inner end of the connection 48 is attached to the intermediate portion of the arm 18.

In practical operation, the arm 18 is swung rearwardly into the position shown in Figure 1, and the detent 27 is extended forwardly across the free end of the arm 18, the outer end of the detent 27 being engaged with the finger 26 on the trigger 22, the spring 19 being under tension. In a similar way, the arm 36 is held by the detent 34 and the trigger 29.

Should the temperature in the incubator fall to a point endangering the eggs in the incubator, the rod 9 will be carried downwardly by the action of the thermostat 11, the projection 25 on the rod 9 engaging the trigger 22 and swinging the trigger downwardly, the finger 26 being detached from the member 27, and the arm 18 swinging forwardly, under the action of the spring 19 until the arm strikes the stop rod 28. When the arm swings forwardly in the direction of the arrow A, a pull will be exerted on the flexible connection 48, the pawl 44 will be disengaged from the ratchet wheel 47, and the gong 41 will sound.

Similarly, when the temperature in the incubator rises to the danger point, the projection 32 cooperating with the trigger 39 will detach the trigger from the detent 34, the arm 36 being set free, and swinging in the direction of the arrow B against the stop rod 38, a pull being exerted on the connection 49, the pawl 44 being disengaged from the ratchet wheel 47 and the gong 41 being sounded.

What is claimed is:—

1. In an incubator, a thermostatically operated member; a signal; a spring actuated arm mounted for swinging movement; a connection between the arm and the signal; a detent cooperating with the arm to hold the same set; and a trigger mounted for swinging movement and engaged releasably with the detent, said member embodying

means for disengaging the trigger from the detent.

2. In an incubator, a thermostatically operated member; a signal; an arm mounted for swinging movement; a connection between the arm and the signal; a detent pivotally mounted at one end and extended across the arm to hold the arm set; and a trigger mounted for swinging movement and engaged releasably with the detent, the thermostatically operated member being movable within limits, independently of the trigger, and embodying a projection adapted to engage the trigger when said member has moved beyond a predetermined point.

3. In an incubator, a thermostatically operated member; a signal; a spring-actuated arm supported for swinging movement; a connection between the arm and the signal; a movable detent coacting with the arm to hold the arm set; and a movable trigger engaging the detent releasably, said member embodying means for engaging the trigger, to release the trigger from the detent, after said member has moved a predetermined amount.

4. In an incubator, a thermostatically operated member movable in opposite directions; a signal; spring-actuated arms supported for swinging movement; connections between the arms and the signal; detents cooperating with the arms to hold the same set; triggers mounted for swinging movement and engaged releasably with the detents; and projections on the thermostatically operated member, one projection cooperating with one trigger to release the same when the thermostatically operated member moved in one direction, and the other projection cooperating with the other trigger to release the same, when the thermostatically operated member moves in an opposite direction.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

OSCAR P. MORRISON.

Witnesses:

A. A. COPELAND,  
W. H. DALLAS.