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THERMOSTAT HEATER FOR DESTROYING MOTHS

Filed July 10, 1929

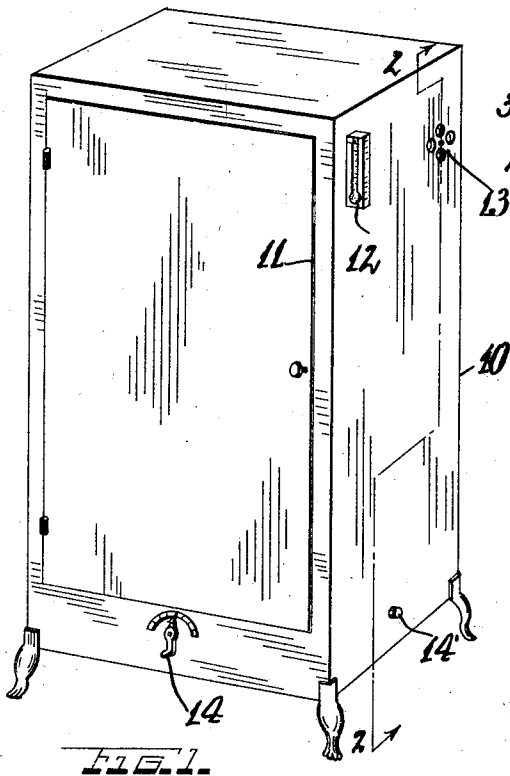


FIG. 1.

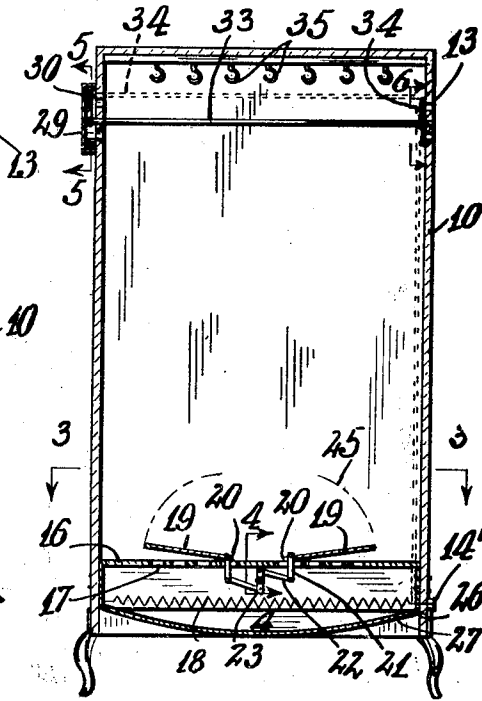


FIG. 2.

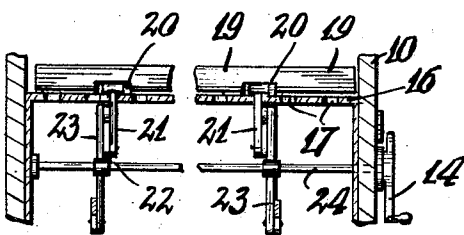


FIG. 4.

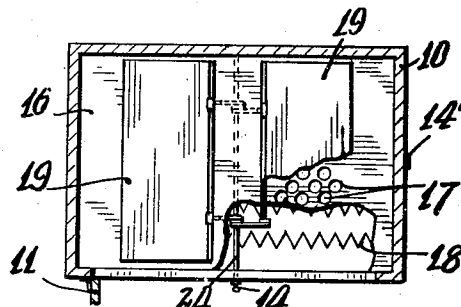


FIG. 5.

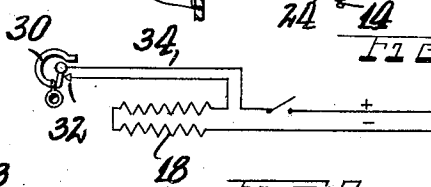


FIG. 7.

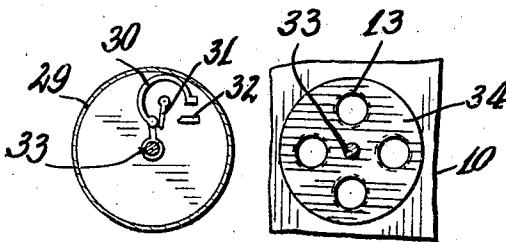


FIG. 5.

FIG. 6.

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THERMOSTAT HEATER FOR DESTROYING MOTHS

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This invention relates to a moth and larva exterminator and has for its object to provide an apparatus adaptable for containing clothing and other material within a closed casing, and in combination with the said casing, a means for heating the interior thereof to a degree sufficient for destroying the said moths and any insect embryo which may be present.

Another object is to provide means for deflecting and directing the heat waves so as to prevent their direct impingement on the articles within the container.

Another feature is a thermostatic control adapted to act upon the heat producing elements and to simultaneously actuate an air vent in the said casing.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:

Fig. 1 is a perspective view of a cabinet constructed in the manner claimed and described herewith.

Fig. 2 is a section on the line 2—2 of Fig. 1 and illustrates the interior of the cabinet and the heating and control elements.

Fig. 3 is a plan section on the line 3—3 of Fig. 2.

Fig. 4 is an enlarged fragmentary sectional view of the deflector mechanism as seen on the line 4—4 of Fig. 2.

Fig. 5 is an enlarged section of the thermostat as seen on the line 5—5 of Fig. 2.

Fig. 6 is an enlarged fragment of the casing wall with the air vent shutter mounted thereon and as seen on the line 6—6 of Fig. 2.

Fig. 7 is a wiring diagram illustrating the electric circuit as used in the device claimed.

Referring first to Fig. 1 of the drawings, the casing 10, which may be of any suitable material has a door 11, it may however have double doors, or other means of access if desired.

A thermometer 12 is provided to indicate the interior temperature, and air vents 13 are positioned near to the top of the cabinet. A small crank 14 actuates a deflector mechanism which will be described later, and an electric plug socket 14' is adapted for connection with a suitable current supply.

The cabinet is seen in vertical section in Fig. 2 in which the heating elements are shown built into the base portion. These elements comprise a floor 16 with perforations 17 and resistance element 18, and mounted above the said floor, the deflectors 19. Lugs 20 pivotally support the said deflectors. Lever arms 21 are firmly attached to the deflectors and these pass downward through slots in the floor and are pivotally secured to the links 22 which connect them with the rocker bars as seen at 23. These elements are all shown in plan view in Fig. 3 and in enlarged transverse view in Fig. 4 in which it will be seen that the rocker bars are mounted on a rod 24 which extends outward through the casing and has at its extremity the crank 14.

Heat from the element 18 passes upward through the perforations 17 and may be directed toward the side portions of the cabinet by adjusting the deflectors. This is done by turning the crank 14 and the deflector panels move in the arcs 25. It will be seen that the heating elements are all contained in the base casing 26 which has a concave bottom 27 and has its sides attached to the cabinet walls.

A form of thermostat 29 is illustrated in Fig. 5 in which a member 30 is adapted to expand and contract under the action of the heat within the cabinet and in these movements acts on the armature 31 to bring it into contact with the element 32 thus closing, or opening the circuit which applies the heating mechanism. At the same time it revolves the rod 33 and operates the shutter 34 which is shown in Fig. 6. Other forms of thermostat may be employed to thus actuate the shutter and the circuit cut-off if desired. The connecting wires of the thermostat are indicated at 34 in Fig. 2.

Hooks 35 are provided for holding the

articles to be treated, but shelves or other means may be used as required.

In operation, the heat is first raised to about 105 degrees Fahrenheit. Clothing or other material is placed within the cabinet and the temperature is brought up to about 130 degrees and is kept at approximately that point for about thirty hours, the shutter and the cut-off mechanism acting together to control the heat and the said heat being deflected and directed as required to produce the desired results.

While I have shown and described the preferred embodiment of my invention, it is to be understood that I do not limit myself to the precise construction herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

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

1. In an exterminator of the class described, a cabinet, means of access thereto, air vents in the said cabinet and a rotatable shutter over the said vents, a thermostatic element on the said cabinet and attached to the wall opposite to the said vents, a rod connected at one end to the said thermostatic element and to the said shutter at the other, an electric contact adjacent to the said thermostatic element and adapted to be opened and closed simultaneously with the operation of the said shutter, a heating element at the base of the said cabinet, deflector panels above the said heating element and an electric circuit connecting the contacts of the said thermostatic element with the current supply of the aforesaid heating element.

2. In an exterminator of the class described, a cabinet, means of access thereto, air vents in the said cabinet and a rotatable shutter having apertures aligning with the said vents, a thermostatic element on the said cabinet and attached to the wall opposite to the said vents, a rod connected at one end to the said thermostatic element and to the said shutter at the other, an electric contact adjacent to the said thermostatic element and adapted to be opened and closed simultaneously with the operation of said shutter, a heating element at the base of the said cabinet, deflector panels above the said heating element and an electric circuit connecting the contacts of the said thermostatic element with the current supply of the aforesaid heating element.

3. In an apparatus of the character described, a casing, elements adapted to heat the interior thereof, means to direct the said heat in deflected waves within the said casing, means to control the degree of heat by cutting off and re-connecting the current

supply of the heating elements, a movable shutter mounted on the casing and having apertures aligning with apertures on the casing, and a rod axially mounted on the shutter and connected with the heat controlling means for co-operating therewith to move said shutter apertures out of alignment with the said casing apertures.

In testimony whereof I have affixed my signature.

HENRY MAFFONI.