

in their entirety to detect the energy emitted by other objects, in the form of infrared radiation (IR emission), for which reason these PIR sensors do not detect or measure "heat", but they detect the infrared radiation emitted by an object, which is associated with the temperature thereof.

5 In the present invention it will be understood that when the passive infrared sensor detects a temperature or a temperature change, it will be detecting an infrared radiation emission or a change in infrared radiation, respectively.

10 It is well known that insects have the same temperature as the environment that surrounds them, and this makes them undetectable by passive infrared sensors alone, given that these detection systems can only detect if there are temperature variations, in the form of infrared radiation (IR emission) in the surroundings where they are located.

15 Therefore, an aspect of the present invention provides a device for detecting insects characterized in that it comprises an inner chamber provided with an opening for the entrance of an insect, an inner heating base that has an electrical resistance located in said inner heating base for supplying heat and determining a temperature (T_i) in said inner chamber based on infrared radiation associated with said inner chamber temperature, and a passive
20 infrared sensor enabled to detect infrared radiation that emits an alarm signal when it detects a change in infrared radiation in the inner chamber caused by an insect having a temperature equal to an outside temperature (T_e) entering into the inner chamber based on the insect emitting infrared radiation associated with said outside temperature.

25 The device can be functionally associated to an alarm receiver, by means of the alarm signal.

30 The device of the present invention, upon detecting a change in infrared radiation in the inner chamber due to the presence of an animal, for example, an insect that has entered into said inner chamber, with a body temperature different than that found inside, emits an alarm signal, which will be picked up and processed by an alarm receiver, hence both elements are functionally associated.

35 The inner chamber of the device is set at a temperature T_i from 20°C to 40°C. A preferred working temperature of the inner chamber is 35°C. This temperature T_i of the inner chamber is an attractive temperature for the insect, for which reason it is used as a main source for attracting the insect. Additionally, the attraction of the insect can also be accompanied by any other

CLAIMS

1. Device for detecting insects characterized in that it comprises:
 - an inner chamber provided with an opening for the entrance of an insect,
 - 5 - an inner heating base that has an electrical resistance located in said inner heating base for supplying heat and determining a temperature (T_i) in said inner chamber based on infrared radiation associated with said inner chamber temperature, and
 - a passive infrared sensor enabled to detect infrared radiation and that
 - 10 emits an alarm signal when it detects a change in infrared radiation in the inner chamber caused by an insect having a temperature equal to an outside temperature (T_e) entering into the inner chamber based on the insect emitting infrared radiation associated with said outside temperature.
- 15 2. Device for detecting insects according to claim 1, wherein the inner chamber has a temperature (T_i) from 20 - 40°C.
3. Device for detecting insects according to claim 2, wherein the inner
- 20 chamber has a temperature (T_i) of 35°C.
4. Device for detecting insects according to claim 1 that additionally has complementary means for attracting insects selected from among food, pheromones and ultraviolet light.
- 25 5. Device for detecting insects according to claim 1 wherein the inner heating base is connected to an energy source.
6. Device for detecting insects according to any preceding claim, wherein
- 30 the outside temperature (T_e) is less than the temperature (T_i) of the inner chamber such that the passive infrared sensor detects a difference in infrared radiation in said inner chamber upon the insect entering it, and the passive infrared sensor emits the alarm signal in response to the presence of the insect.