

Title (en)

DEVICE PROVIDING PROTECTION AGAINST INSECT BITES WITHOUT MODIFYING THE ECOLOGICAL BALANCE

Title (de)

VORRICHTUNG FÜR DEN SCHUTZ VOR INSEKTENSTICHEN, OHNE DAS ÖKOLOGISCHE GLEICHGEWICHT ZU VERÄNDERN

Title (fr)

DISPOSITIF POUR PROTEGER CONTRE LES PIQURES D'INSECTES SANS MODIFIER L'EQUILIBRE ECOLOGIQUE

Publication

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Application

EP 99915436 A 19990427

Priority

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Abstract (en)

[origin: WO9955151A1] A device providing protection against insect bites without modifying the ecological balance, whereby one module (1) which can be fitted into a wristwatch (30) contains two oscillators that produce oscillations at different frequencies which transform the oscillations produced in relation to human skin using two corporal antennae (6, 7). Both oscillations overlap and are propagated in the form of surface waves over the entire surface of the skin. Female bloodsucking mosquitoes obtain food from living mammals and human beings by sucking up blood from the bleeding dermis through the proboscis. In order to carry out such an act, the mosquitoes come into contact with the surface of the epidermis on which the oscillations are superposed. The highly sensitive sensilla are distributed over the entire body of the insect and are reinforced at certain points such as the feelers, the rostra and the feet. Said sensilla react to the superposed surface oscillations which are adapted to their resonance frequencies. The oscillations are converted into stimulus flows by sensory cells containing biochemical and mechanical stimuli, whereby said flows are directed in an appropriate manner via the nervous system towards the tripartite upper pharyngeal ganglion (the brain of the insect). The information received is transmitted by the nervous system, whereby said nervous system forms the lower pharyngeal ganglion with its nerve nodal point, to the muscular motor system which activates the control process for the proboscis. The desire of the mosquito suck blood is disrupted and the mosquito avoids the surface of the skin.

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