

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
EP 1075181 A1 20010214 (DE)

Application
EP 99915436 A 19990427

Priority
• CH 9900173 W 19990427
• CH 96798 A 19980429

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.

IPC 1-7
A01M 29/00

IPC 8 full level
A01M 29/28 (2011.01)

CPC (source: EP KR)
A01M 29/28 (2013.01 - EP KR)

Cited by
US10820587B2

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
WO 9955151 A1 19991104; AU 3404699 A 19991116; BR 9911019 A 20010925; CN 1306392 A 20010801; CZ 20004023 A3 20010912; EP 1075181 A1 20010214; HU P0101819 A2 20010928; JP 2002512051 A 20020423; KR 20010043129 A 20010525; MX PA00010657 A 20050203; NO 20005406 D0 20001027; NO 20005406 L 20001115; TR 200003177 T2 20010221

DOCDB simple family (application)
CH 9900173 W 19990427; AU 3404699 A 19990427; BR 9911019 A 19990427; CN 99807530 A 19990427; CZ 20004023 A 19990427; EP 99915436 A 19990427; HU P0101819 A 19990427; JP 2000545369 A 19990427; KR 20007012022 A 20001028; MX PA00010657 A 19990427; NO 20005406 A 20001027; TR 200003177 T 19990427