Title: BEHIND-THE-EAR AUDITORY DEVICE

Abstract: An auditory device is disclosed. The auditory device includes a behind-the-ear element and an at least partially in-ear element. The behind-the-ear element has a shell shaped to fit behind an outer portion of an ear of a user. The shell has first and second sides that are substantially parallel to each other. The first side faces the outer portion of the ear, and the second side faces a head of the user. The behind-the-ear element also includes sound processing circuitry within the shell. The behind-the-ear element-further includes an ear cushion switch operatively connected to the sound processing circuitry. The ear cushion switch is located on the first side of the shell. The at least partially in-ear element includes a microphone, acoustic pickup pillow-pad, sensors, receiver and a cushioned tip. The at least partially in-ear element can include a closed ear detachable cushioned tip and an open ear detachable cushioned tip.

Published:
— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

Declarations under Rule 4.17:
— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(H))
— as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(Ui))
— of inventorship (Rule 4.17(iv))

(88) Date of publication of the international search report: 31 May 2007

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04R 25/00 (2007.01)
USPC - 381/324

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8) - H04R 25/00 (2007.01)
USPC - 381/324

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
MicroPatent, IP.com, DialogPro

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category* Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No.
Y

* Further documents are listed in the continuation of Box C.

T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
& document member of the same patent family

Date of the actual completion of the international search
20 February 2007

Name and mailing address of the ISA/US
Mail Stop PCT, Attn: ISA/US, Commissioner for Patents
P.O. Box 1450, Alexandria, Virginia 22313-1450
Facsimile No. 571-273-3201

Date of mailing of the international search report
17 APR 2007

Authorized officer:
Blaine R. Copenheaver
PCT Helpdesk: 571-272-4300
PCT OSP: 571-272-7774
This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
   because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
   because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
   because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

This International Searching Authority found multiple inventions in this international application, as follows:
This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I, claims 1-23, 41-45, drawn to an earphone switch operatively connected to sound processing circuitry.
Group II, claims 24-40, 46-51, drawn to a detachable cushioned tip.
Group III, claims 52-57, drawn to a body temperature sensor.
The inventions listed as Groups I, II and III do not relate to a single general inventive concept under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the special technical feature of Group I, an earphone switch operatively connected to sound processing circuitry is not found in Groups II or III.
The special technical feature of Group II, a detachable cushioned tip, is not found in Groups I or III, and the special technical feature of Group III, a body temperature sensor, is not found in Groups I or II.
Since none of the special technical features of Groups I, II and III, inventions is found in more than one of the inventions, unity of invention is lacking.

1. ☑ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☑ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims: it is covered by claims Nos.:

   1-23, 41-45

Remark on Protest ☑ The additional search fees were accompanied by the applicant’s protest and, where applicable, the payment of a protest fee.

☒ The additional search fees were accompanied by the applicant’s protest but the applicable protest fee was not paid within the time limit specified in the invitation.

D No protest accompanied the payment of additional search fees.