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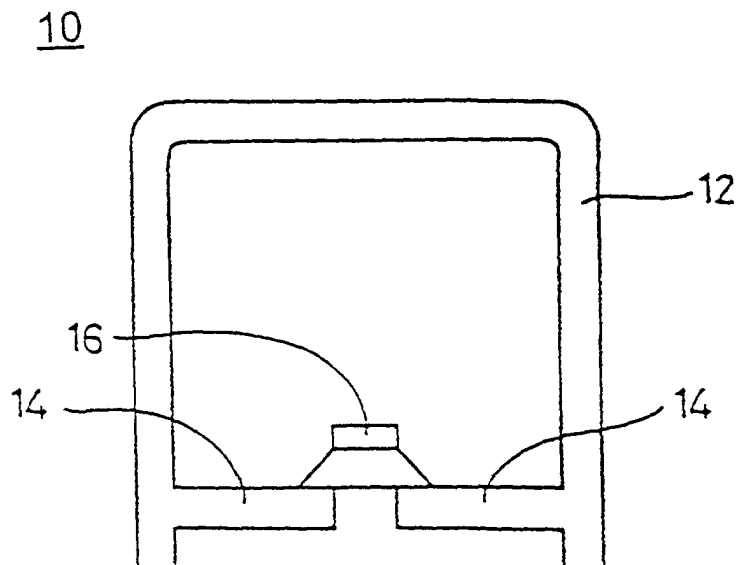
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(54) **Speaker and speaker device**

(57) A speaker has a very small size and is arranged to emit sound waves in a non-directional manner. The speaker includes a case (12) and a speaker unit (16) attached to a plate (14) provided at an opening of the case (12). The speaker is arranged so that the speaker

unit (16) is mounted or attached to a floor or support surface such that a space formed by the case (12), the plate (14) and the speaker unit (16) is airtight and so that the back-and-forth motion of a vibrator of the speaker unit (16) generates expansion and contraction of the case (12).

FIG. 2



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EUROPEAN SEARCH REPORT

Application Number
EP 99 40 2359

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 4 392 548 A (BAILEY ET AL) 12 July 1983 (1983-07-12)	1-3,5,6, 8,9	INV. H04R1/02
Y	* column 2, line 5 - column 6, line 22; claims; figures 1-6 *	4	H04R1/28
A	-----	7	
X	EP 0 284 051 A (MEGGL, FRIEDEMANN, DR.-ING) 28 September 1988 (1988-09-28)	1,3,5,6, 8,9	
Y	* column 3, line 35 - column 5, line 45; claims; figures 1-4 *	4	
A	-----	7	
A	EP 0 806 882 A (NOKIA TECHNOLOGY GMBH) 12 November 1997 (1997-11-12)	1-9	
	* column 2, line 50 - column 4, line 11; figures 1-5 *		
A	-----		
A	WO 89/07875 A (MAZUZA, GEORGE) 24 August 1989 (1989-08-24)	1-9	
	* page 3, line 26 - page 5, line 7; figure 4 *		
A	-----		
A	DE 38 25 997 A1 (WAGNER, DIETER, 7000 STUTTGART, DE) 1 February 1990 (1990-02-01)	1-9	H04R
	* column 2, line 28 - column 3, line 49; figure 1 *		

The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 10 March 2006	Examiner Kiernan, L
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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EPO FORM 1503 03.82 (P04C01)

**CLAIMS INCURRING FEES**

The present European patent application comprised at the time of filing more than ten claims.

- ☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

- ☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☒ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

1-9



The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-9

The subject-matter of independent device claim 1 concerns a speaker device in which the case of the speaker is arranged to emit the sounds produced by the acoustic transducer within the airtight case.

2. claims: 10-20

The subject-matter of independent device claim 10 concerns a speaker device having a case, a speaker unit and an amplifier stored in the case, the amplifier being located in front of the speaker unit.

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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10-03-2006

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