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### **EUROPEAN PATENT APPLICATION**

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## (54) Hearing device partially insertable into an ear canal

(57)The hearing device (1) comprises an insertable part (16), which is to be inserted into an ear canal of a user of the hearing device (1). The insertable part (16) may be identical with the hearing device (1) itself, and the insertable part (16) comprises a casing, which casing comprises a deformable part (2). The hearing device (1) comprises means for changing a cross-sectional area (20) of the deformable part (2), which change in the crosssectional area (20) is reversible. The means for changing a cross-sectional area (20) of the deformable part (2) may comprise at least one deformable volume (5) containing a fixed amount of a filler (4). The means can be a means for changing the cross-sectional area (20) of the deformable part (2) through changing the axial extension of the deformable part (2). The means can be a volume capacity change means for changing the crosssectional area (20) of the deformable part (2) through changing the capacity of a variable volume arranged within the hearing device (1), the deformable part (2) being arranged on the outside of the variable volume.

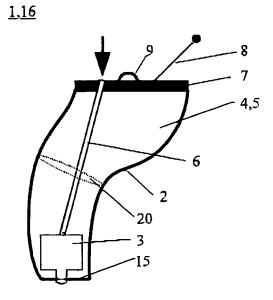


Fig. 2



# **EUROPEAN SEARCH REPORT**

Application Number EP 05 02 5873

	DOCUMENTS CONSID	ERED TO BE RELEVANT			
Category	Citation of document with i of relevant passa	ndication, where appropriate, ages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)	
X Y	US 6 256 396 B1 (CU 3 July 2001 (2001-0 * the whole document		1-12, 18-26 13	INV. H04R25/02	
X Y	US 4 133 984 A (AK: 9 January 1979 (197 * the whole documer	79-01-09)	1-7, 18-26 13		
X	US 4 539 440 A (SC 3 September 1985 (	IARRA ET AL)	1-3, 8-12, 18-21		
	* abstract * * column 1, line 1 figures 1,2 *	- column 4, line 40;	10-21		
Х	SAXTON, GARY, M; TS		1-7, 18-26		
Α	* the whole documer	vember 2004 (2004-11-18) nt *	8-12		
A	US 2001/043708 A1 22 November 2001 (2	1-26	TECHNICAL FIELDS SEARCHED (IPC)		
	* the whole documer	nt *		H04R A61F	
	The present search report has	been drawn up for all claims			
	Place of search	Date of completion of the search		Examiner	
	The Hague	24 May 2006	Fül	öp, I	
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		E : earlier patent door after the filling date her D : document cited in L : document cited fo	T: theory or principle underlying the invention E: earlier patent document, but published on, or after the filing date D: document oited in the application L: document oited for other reasons  &: member of the same patent family, corresponding document		

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

EP 05 02 5873

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24-05-2006

Patent document cited in search report			Publication date		Patent family member(s)	Publication date
US	6256396	В1	03-07-2001	NONE		
US	4133984	A	09-01-1979	DE JP	2737252 A1 53030316 A	02-03-19 22-03-19
US	4539440	Α	03-09-1985	NONE		
WO	2004100608	Α	18-11-2004	NONE		
US	2001043708	A1	22-11-2001	AU WO	2225700 A 0042817 A1	01-08-20 20-07-20

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