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### (54) Device for amelioration of the quality of hearing

(57) This is referred to patients with partial or total loss of hearing of the one ear and somehow good or excellent condition of the other ear.

The essential difference from the ordinary dullness earphones of optic glasses type, or any other type or system, is the addition of a second microphone in the altitude of the ear with necrosis.

By the use of this device the patient may perceive low intensity sounds even whistles as well as the sound of a telephone earphone from the side and close to the ear with necrosis.

This device consists of:

1. Microphone: mini condensing microphone (ordinary)

2. Pre-amplifier of acoustic frequencies (ordinary)
3. Earphone: (or sound vibrations system for incitement through the cranial bones, of the acoustic nerve), for the healthy ear (ordinary).
4. Batteries and switch on-off (ordinary)
5. Adjuster for voice volume (ordinary).



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## EUROPEAN SEARCH REPORT

Application Number  
EP 99 60 0013

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
Y	GB 1 559 611 A (TELEX COMMUNICATIONS) 23 January 1980 (1980-01-23) * page 1, column 1, line 14 - page 1, column 2, line 69 * * page 2, column 2, line 97 - column 3, line 44; figures 1-3,9 * ---	1-5	H04R25/00 G02C11/06
Y	US 3 019 305 A (MCCARRELL STUART G) 30 January 1962 (1962-01-30) * column 1, line 23 - column 1, line 31 * * column 3, line 34 - column 3, line 39; figures 1-7 * * column 3, line 34 - column 3, line 39; figures 1-6 *	1-5	
A	GR 2 001 901 Y (PIERROUTSAKOS MICHAEL DIMITRIS) 1 April 1997 (1997-04-01) * the whole document *	1-5	
A	HARFORD E ET AL: "A REHABILITATIVE APPROACH TO THE PROBLEM OF UNILATERAL HEARING IMPAIRMENT: THE CONTRALATERAL ROUTING OF SIGNALS (CROS)" JOURNAL OF SPEECH AND HEARING DISORDERS, AMERICA SPEECH AND HEARING ASSOCIATION, DANVILLE, IL, US, vol. 30, no. 2, May 1965 (1965-05), pages 121-138, XP009008743 ISSN: 0022-4677 * the whole document *	1-3	TECHNICAL FIELDS SEARCHED (Int.Cl.7) H04R G02C
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The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
MUNICH		29 April 2003	Kunze, H
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			

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

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