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(54) Title: ACOUSTIC DEVICE WITH A VARIABLE FOCAL LENGTH

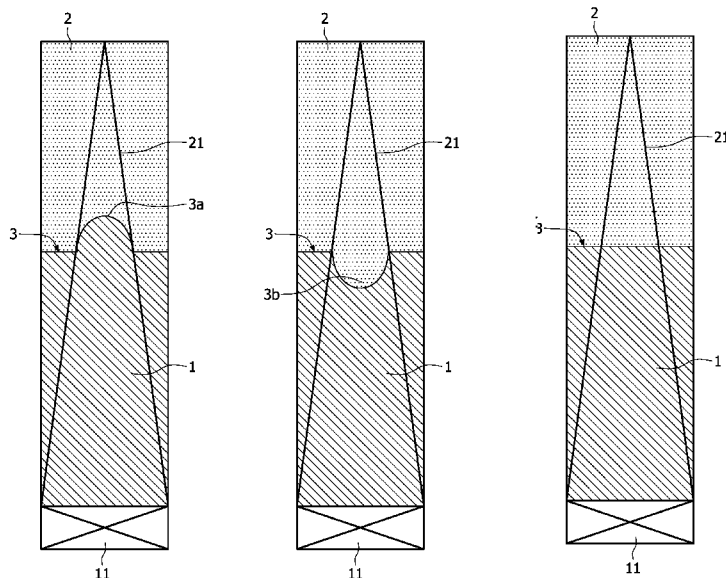


FIG. 1a

FIG. 1b

FIG. 1c

(57) Abstract: The invention relates to an acoustic device comprising an acoustic lens with variable focal length and means (11) for directing incoming acoustic waves onto the lens, wherein the acoustic lens comprises a first fluid medium (1) and a second fluid medium (2) that are not miscible with each other, in which the acoustic waves (21) have different velocities and with a contact meniscus (3) between the two fluid media (1,2), wherein the difference in viscosity of the two fluid media (1,2) is such that the contact meniscus is substantially unperturbed by the acoustic waves (21). The invention is based on the experimental observation that the main physical parameter which determines the interaction between the acoustic waves (21) and the contact meniscus (3) are the values of the viscosity of the two fluid media (1,2). Therefore, the perturbation of the contact meniscus (3) between the two fluid media (1,2) by the acoustic waves (21) is reduced considerably when the values of the viscosity of the two fluid media (1,2) are selected appropriately leading to an increased control of the functioning of the acoustic lens.

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**B. FIELDS SEARCHED**Minimum documentation searched (classification system followed by classification symbols)  
G10K

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 practical, search terms used)

EPO-Internal

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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X	WO 03/069380 A (KONINKL PHILIPS ELECTRONICS NV [NL]; FEENSTRA BOKKE J [NL]; KUIPER STE) 21 August 2003 (2003-08-21) page 4, line 3 - line 10 page 8, line 21 - line 25	1,11
A	US 5 305 755 A (NAKAO NARUTAKA [JP]) 26 April 1994 (1994-04-26) claim 1; figure 6	1,11
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 Further documents are listed in the continuation of Box C. See patent family annex.

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

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Information on patent family members

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