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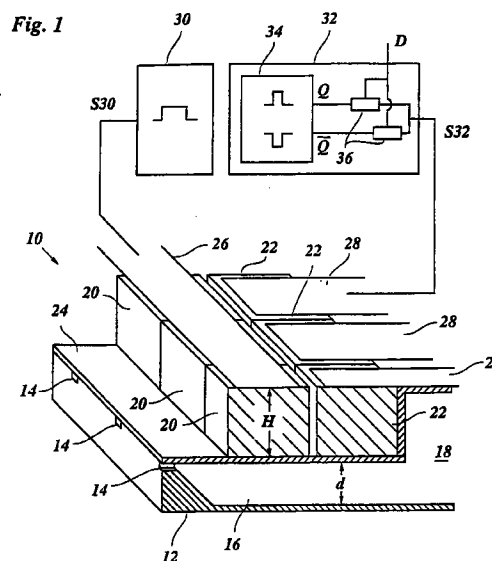
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(54) Ink-jet system

(57) Ink-jet system comprising an ink channel (16) between an ink reservoir (18) and a nozzle (14), and pressurizing means (20, 22) arranged adjacent to the ink channel for generating in the ink liquid an acoustic pressure wave propagating in the ink channel, so that an ink droplet is expelled from the nozzle, wherein

- the ink channel (16) has a square cross section and a depth d which is larger than the height of the nozzle (14), such that energy losses due to reflection of the acoustic wave at the transition from the ink channel to the nozzle are minimized,
- the pressurizing means comprise a first electromechanical transducer (20) with a plate-like expansible member having a height H in the direction of the depth of the ink channel such that the ratio H/d is smaller than the ratio between the respective elastic modules of the expansible member and the ink liquid, and
- at least one second electromechanical transducer (22) is arranged at said ink channel (16) and is energized to create a pressure bias in the ink volume before the same is pressurized by the first transducer.





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EUROPEAN SEARCH REPORT

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EP 96 20 1578

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	DE 43 28 433 A (HEIDELBERGER DRUCKMASCHINEN AG) * the whole document *	1-6	B41J2/045
A	PATENT ABSTRACTS OF JAPAN vol. 009, no. 128 (M-384), 4 June 1985 & JP 60 011369 A (FUJITSU KK), 21 January 1985, * abstract *	1	
A	US 4 525 728 A (KOTO) * the whole document *	1-6	
T	"1985 Sid International Symposium, Digest of Technical Papers", PALISADES INSTITUTE FOR RESEARCH SERVICES, INC., NEW YORK XP002031532 * page 317 - page 320 *	1-6	
A	US 4 364 069 A (KOBAYASHI) * the whole document *	1-6	TECHNICAL FIELDS SEARCHED (Int.Cl.6)
A	EP 0 214 855 A (NEC CORPORATION) * the whole document *	1-6	B41J
A	US 4 672 398 A (KUWABARA ET AL.) * the whole document *	1-6	
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A	GB 2 104 006 A (SHINSHU SKI KK) * the whole document *	1	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 26 May 1997	Examiner Meulemans, J-P
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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