

Title (en)  
INK JET HEAD CARTRIDGE WITH A RESIDUAL-INK DETECTOR

Publication  
**EP 0370765 A3 19900822 (EN)**

Application  
**EP 89312075 A 19891121**

Priority  
• JP 28873689 A 19891108  
• JP 29362788 A 19881122

Abstract (en)  
[origin: EP0370765A2] A device for detecting a quantity of remaining ink includes first and second electrodes (1, 2) provided in an ink supply passage (6) which connects an ink tank (8) for storing an ink to a recording head (9) for emitting the ink, and a detection means for detecting a resistance between the first and second electrodes (1, 2). The second electrode (2) is provided in the ink supply passage (6) in an area relatively close to the recording head (9), whereas the first electrode (1) is provided in the ink supply passage in an area relatively far from the recording head with the second electrode therebetween. The second electrode is maintained at the same potential as that of a substrate which constitutes the recording head and on which emission energy generating elements driven to emit the ink are disposed, whereas the first electrode is maintained at a potential different from that of the second electrode. IN consequence, the amount of remaining ink can be detected by measuring changes in the resistance between the first and second electrodes (1, 2).

IPC 1-7  
**B41J 2/175**

IPC 8 full level  
**B41J 2/125** (2006.01); **B41J 2/175** (2006.01); **G01F 23/24** (2006.01)

CPC (source: EP)  
**B41J 2/17566** (2013.01); **B41J 2002/17579** (2013.01); **B41J 2202/13** (2013.01)

Citation (search report)  
• [A] FR 2348822 A1 19771118 - SIEMENS AG [DE]  
• [A] US 4183029 A 19800108 - FUKAZAWA TAKAO [JP], et al  
• [A] PATENT ABSTRACTS OF JAPAN vol. 12, no. 424 (M-761)(3271) 10 November 1988, & JP-A-63 158262 (CANON) 01 July 1988,

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US6361135B1; EP1190860A1; EP0834402A3; US5329304A; US6022090A; EP0701900A4; US5724076A; US5289211A; US6554380B2; US6626516B2; EP0783968A2

Designated contracting state (EPC)  
DE ES FR GB IT NL

DOCDB simple family (publication)  
**EP 0370765 A2 19900530; EP 0370765 A3 19900822; EP 0370765 B1 19960306**; DE 68925865 D1 19960411; DE 68925865 T2 19960814; JP 2675163 B2 19971112; JP H02231145 A 19900913

DOCDB simple family (application)  
**EP 89312075 A 19891121**; DE 68925865 T 19891121; JP 28873689 A 19891108