

Title (en)  
Image forming apparatus

Title (de)  
Bilderzeugungsgerät

Title (fr)  
Appareil de formation d'images

Publication  
**EP 0703080 A3 19970312 (EN)**

Application  
**EP 95114586 A 19950915**

Priority  
JP 22761594 A 19940922

Abstract (en)  
[origin: EP0703080A2] An image forming apparatus uses as an image-forming agent an ink containing toner having charged particles. The recording head (1) of the image forming apparatus has an insulating substrate (4) formed with discharge electrodes (2), and an insulating upper plate (13) formed with a common electrode (14). The discharge electrodes (2) and the common electrode (14) oppose each other, and a gap serving as an ink supply passage (20) is formed between them. The supply passage (20) is connected to an ink supply/recovery mechanism (100), and the ink (6) is supplied from this mechanism to the supply passage (20). A platen roller (114) serving as a counter electrode set at the ground potential is provided ahead of the distal end of the supply passage (20). A recording medium (108) is placed on the surface of the platen roller (114) so as to face the recording head (1). A voltage is applied between the discharge electrodes (2) and the common electrode (14) to form an electric field in the supply passage (20). Thus, a toner concentration difference is formed in the ink (6) as a toner preliminary gathering process. The toner preliminary gathering process increases the toner agglomerating efficiency at discharge points (DP). <IMAGE>

IPC 1-7  
**B41J 2/06**

IPC 8 full level  
**B41J 2/06** (2006.01); **B41J 2/385** (2006.01); **G03G 15/05** (2006.01)

CPC (source: EP)  
**B41J 2/06** (2013.01); **B41J 2002/061** (2013.01); **B41J 2002/063** (2013.01)

Citation (search report)  
• [DYA] WO 9311866 A1 19930624 - AUSTRALIA RES LAB [AU]  
• [YA] PATENT ABSTRACTS OF JAPAN vol. 014, no. 416 (M - 1021) 7 September 1990 (1990-09-07)  
• [A] PATENT ABSTRACTS OF JAPAN vol. 017, no. 455 (M - 1466) 20 August 1993 (1993-08-20)

Cited by  
US6059399A; EP0813966A3; US6172697B1; US6443560B1; US6123415A; US6113219A; EP0827832A3; AU722573B2; US6135588A; US6247797B1; US6409313B1; US5988795A; US6648434B2; US6224193B1; US6172693B1; EP0997282A3; EP0771654A1; US5975684A; US5992756A; US6070967A; US6095638A; EP0844087A3; EP0813964A3; CN105291585A; US6126274A; US6164760A; US6102522A; EP0827831A3; US6361148B1; US6328426B1; US6394583B1; US6213591B1; WO9832609A1; WO9727056A1

Designated contracting state (EPC)  
DE FR GB

DOCDB simple family (publication)  
**EP 0703080 A2 19960327; EP 0703080 A3 19970312**; JP 3315268 B2 20020819; JP H0890825 A 19960409

DOCDB simple family (application)  
**EP 95114586 A 19950915**; JP 22761594 A 19940922