

Title (en)  
Fluid jet printing.

Title (de)  
Flüssigkeitsstrahldrucker.

Title (fr)  
Impression par projection de fluide.

Publication  
**EP 0107743 A1 19840509 (EN)**

Application  
**EP 82305268 A 19821004**

Priority  
EP 82305268 A 19821004

Abstract (en)  
A triode-structured charge injection system for fluid jet printing is disclosed which is not dependent upon the conductivity of the ink fluid to form and target the ink fluid. Two electrodes (16, 17) are in contact with the ink liquid and they are submerged in the fluid (12). One electrode is an emitter (16) and serves to field emit charge into the liquid in response to a voltage between it and the other electrode. Depending upon the electrical mobility of the ink fluid (12), the injected charge will be trapped in the liquid. The liquid is then forced from an orifice (18) and can be made to undergo break-up into droplets similar to inductively charged inks. The paper or target (20) upon which the droplets impinge functions as a third electrode (19), returning the charge and completing the circuit. The ink may also be propelled as a charged column, which column can be directed by an extraneous electrical field for targeting upon the printing paper.

IPC 1-7  
**B41J 3/04**

IPC 8 full level  
**B41J 2/035** (2006.01)

CPC (source: EP)  
**B41J 2/035** (2013.01)

Citation (search report)

- [Y] US 4333086 A 19820601 - EBI YUTAKA
- [Y] GB 2031344 A 19800423 - NIPPON TELEGRAPH & TELEPHONE
- [A] US 4166277 A 19790828 - CIELO PAOLO [CA], et al
- [A] US 3693179 A 19720919 - SKALA STEPHEN F
- [A] US 3177800 A 19650413 - FRAZER WELSH HERBERT
- [A] FR 2256034 A1 19750725 - XEROX CORP [US]
- [A] L'INDUSTRIE TEXTILE, no. 1090, June 1979, pages 535-541, Paris, FR.

Designated contracting state (EPC)  
BE CH DE FR GB IT LI NL

DOCDB simple family (publication)  
**EP 0107743 A1 19840509**

DOCDB simple family (application)  
**EP 82305268 A 19821004**