

Title (en)

Method for fabricating an ink jet printer nozzle member.

Title (de)

Verfahren zur Herstellung eines Düsenkörpers für einen Tintenstrahldrucker.

Title (fr)

Procédé de fabrication de l'élément à buse pour une imprimante à jet d'encre.

Publication

EP 0177316 A2 19860409 (EN)

Application

EP 85306956 A 19850930

Priority

- JP 16240385 A 19850723
- JP 17791185 A 19850813
- JP 19629085 A 19850905
- JP 20340684 A 19840928

Abstract (en)

[origin: EP0355862A1] In an ink jet printer, a print head (1) comprises a front nozzle member (2) having a front channel (3), a housing (4) secured to the front nozzle member, and a rear nozzle member (7) which defines with the housing a liquid chamber (5) and further defines with the front nozzle member a laminar airflow chamber (10a). The rear nozzle member has a forwardly projecting nozzle (8) and a rear channel (9) extending from the liquid chamber through the projecting nozzle in axial alignment with the front channel (3) to form a meniscus at the front end. The airflow chamber is connected to an air supply for directing air to a point between the front and rear channels (3, 9) so that it creates a sharp pressure gradient along a path therebetween. A dead air region is created in a location adjacent the exit end of the rear channel to cause the meniscus to take a dome-like shape which is stabilized against vibrations and transients. An electric field gradient is established between the front channel and the meniscus to cause the latter to extend toward the front channel and expelled through the front channel. A portion (2a) of the front nozzle member is liquid-repellant to prevent the field distribution from being seriously disturbed by an ink layer formed on it by stray ink particles.

IPC 1-7

B41J 3/04

IPC 8 full level

B41J 2/16 (2006.01)

CPC (source: EP)

B41J 2/1606 (2013.01); **B41J 2/162** (2013.01); **B41J 2/1623** (2013.01); **B41J 2/1629** (2013.01); **B41J 2/1631** (2013.01); **B41J 2/1632** (2013.01); **B41J 2/1643** (2013.01); **B41J 2202/02** (2013.01)

Cited by

US5010356A; US5121134A; US5867189A; US5574486A; WO9014958A1

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

EP 0355862 A1 19900228; **EP 0355862 B1 19930113**; DE 3583275 D1 19910725; DE 3586998 D1 19930225; DE 3586998 T2 19930722; EP 0177316 A2 19860409; EP 0177316 A3 19870616; EP 0177316 B1 19910619

DOCDB simple family (application)

EP 89117232 A 19850930; DE 3583275 T 19850930; DE 3586998 T 19850930; EP 85306956 A 19850930