

Title (en)

Recording apparatus with a recording head having a wiring substrate

Title (de)

Aufzeichnungsvorrichtung wobei der Aufzeichnungskopf mit einem Verdrahtungssubstrat versehen ist

Title (fr)

Appareil d'enregistrement dont la tête d'enregistrement est munie d'un substrat de câblage

Publication

EP 0451939 B1 19960117 (EN)

Application

EP 91301490 A 19910225

Priority

- JP 4253390 A 19900226
- JP 4987390 A 19900228

Abstract (en)

[origin: EP0451939A2] In the wiring portion in the wiring substrate constituting the recording head of a liquid spray type recording apparatus, the electroconductive layers (30, 141) comprises at least two layers, the protective layer of the electroconductive layer includes at least two unit layers (35, 36, 142, 144), one of them being formed so that it has a shape and size different has a size and shape different from those of the through hole(s) (35a, 36a) in remaining unit protective layer(s) (35, 36, 142, 144), thereby assuring the formation of electric connection portion and improving durability of the electric connection portion. <IMAGE>

IPC 1-7

B41J 2/16

IPC 8 full level

B41J 2/16 (2006.01)

CPC (source: EP)

B41J 2/14129 (2013.01); **B41J 2/1604** (2013.01); **B41J 2/1623** (2013.01); **B41J 2/1628** (2013.01); **B41J 2/1629** (2013.01); **B41J 2/1631** (2013.01); **B41J 2/1643** (2013.01); **B41J 2/1646** (2013.01); **B41J 2202/19** (2013.01)

Designated contracting state (EPC)

AT BE CH DE DK ES FR GB GR IT LI LU NL SE

DOCDB simple family (publication)

EP 0451939 A2 19911016; **EP 0451939 A3 19911211**; **EP 0451939 B1 19960117**; AT E133111 T1 19960215; DE 69116414 D1 19960229; DE 69116414 T2 19960605; ES 2082129 T3 19960316

DOCDB simple family (application)

EP 91301490 A 19910225; AT 91301490 T 19910225; DE 69116414 T 19910225; ES 91301490 T 19910225