

Title (en)
Ink tank cartridge and container therefor

Title (de)
Tintenvorratspatrone und Behälter dafür

Title (fr)
Cartouche de réservoir d'encre et son conteneur

Publication
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Application
EP 92307270 A 19920807

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Abstract (en)
[origin: EP0553535A1] An ink tank cartridge (5) is disclosed including a housing (11,50) removably mounted onto an ink supply needle (14,90) of the ink-jet type recording apparatus body. The housing being provided with an ink supply port (15,53,71) projecting from a bottom surface of the housing both inwardly and outwardly. A porous member (21,64) for impregnating ink is positioned inside the housing abutting against the ink supply port through a filter (17,55). The ink tank cartridge being further provided with a packing member (19,57,73) resiliently abutting against an outer periphery of the ink supply needle at the end of the ink supply port. An end opening is sealed with a sealing member (20,60,77) through which the ink supply needle penetrates. Accordingly, the ink tank cartridge of the invention is advantageous in that the ink supply needle does not require a sharp tip, air is prevented from entering the ink supply path of the recording apparatus, and a tight air-seal between the ink supply needle and the ink tank can be maintained. <IMAGE>

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Opponent :
• DE 3039165 A1 19810507 - CANON KK [JP]
• US 4771295 A 19880913 - BAKER JEFFREY P [US], et al
• FR 2229320 A5 19741206 - MECI MATERIEL ELECT CONTR [FR]
• JP H02187364 A 19900723 - CANON KK [JP]
• JP H0392356 A 19910417 - SEIKO EPSON CORP
• JP H0574341 A 19930326 - TOSHIBA CORP

Cited by
DE19962662B4; EP1164021A3; GB2448872A; EP0778145A1; US5777646A; DE19615997A1; DE19615997C2; US5971533A; EP0854046A3; US6045207A; US5949458A; EP0745480A3; DE19854660B4; US6145974A; EP0674999A3; US5574489A; DE10239659A1; DE10239659B4; DE10216654A1; EP0703083A3; EP0765756A3; US6113230A; US6045218A; EP0834401A3; US5790158A; EP0864428A3; EP1046508A3; EP1598197A3; DE19534578A1; DE19534578C2; US5699095A; EP0676294A3; US5583549A; US5589862A; AU675763B2; AU675764B2; GB2269784B; US5781213A; EP0792748A3; US6951389B2; WO2004045855A2; US6276785B1; US6793305B2; US6783220B2; AU718867B2; US6132036A; EP0791463A3; EP1177905A3; WO2005025875A1; US6238042B1; US6854835B2; US7137679B2; US6474798B1; US7246882B2; US7264334B2; US7284850B2; US6168266B1; US6336719B1; US6490792B1; WO2007015083A3; US6729184B2; US7086281B2; US6247803B1; US6170939B1; GB2300834A; GB2300834B; GB2293140A; DE19534577A1; DE19534613A1; FR2727055A1; NL1001205C2; AU689297B2; GB2293140B; ES2124147A1; DE19534577C2; DE19534613C2; CN1090567C; CN1096953C; CN1329201C; US6312115B1; US6854834B2; US6929359B2; US7086723B2; US7971945B2; US6745626B2; US6799820B1; US7175244B2; US7251996B2; US7267000B1; US7325450B2; US7383727B2

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EP 92307270 A 19920807; DE 69227441 T 19920807; DE 69232194 T 19920807; DE 69232243 T 19920807; DE 69232893 T 19920807; DE 69233371 T 19920807; DE 69233784 T 19920807; EP 00200827 A 19920807; EP 02076904 A 19920807; EP 03026325 A 19920807; EP 08000634 A 19920807; EP 96120032 A 19920807; EP 97200694 A 19920807; HK 00105237 A 20000821; HK 02108240 A 20021113; HK 98100731 A 19980127; HK 98111815 A 19981106; HK 99106082 A 19981106; SG 1996006518 A 19920807