

Title (en)

Cartridge closure with valve function

Title (de)

Kartuschenverschluss mit Ventilfunktion

Title (fr)

Fermeture pour cartouches comportant une fonction de valve

Publication

**EP 1005999 A3 20001018 (DE)**

Application

**EP 99117702 A 19990908**

Priority

DE 19856221 A 19981205

Abstract (en)

[origin: EP1005999A2] When closure cover (13) is removed, pressure on cartridge contents is transferred via a ring gap (6) between the mouth piece neck (2) and central body (5), by the lips (12) of the valve sleeve (7). Valve sleeve has inner axial elasticity due to form of edge ridges (11), so the upper part (8) is moved axially and a ring gap opens between the lip and central body to emit print ink. Central body (5) arched outwards, is connected to neck (2) of mouth piece of cartridge wall (1) and supported on thin ribs (4) projecting inwards. Central body and neck form outlet opening of cartridge. Valve sleeve (7) is seated on neck, valve upper part (8) grips over upper edge of neck with U-shape and inner leg forms elastic sealing lip (14), lying on inner wall of neck to seal it. Upper (8) and ring part (9) of valve sleeve are connected with each other by groups of S-shaped wall ridges (11). Thread (3) of neck has closure cover (13) which screws on during non-use of cartridge.

IPC 1-7

**B41J 2/175; B65D 47/20**

IPC 8 full level

**B41F 31/02** (2006.01); **B41F 31/08** (2006.01); **B41J 2/175** (2006.01); **B65D 47/20** (2006.01); **B65D 47/28** (2006.01)

CPC (source: EP US)

**B41F 31/08** (2013.01 - EP US); **B41J 2/17513** (2013.01 - EP US); **B41J 2/17523** (2013.01 - EP US); **B65D 47/2081** (2013.01 - EP US)

Citation (search report)

- [A] DE 19705201 C1 19980416 - TECHNOTRANS GMBH [DE]
- [A] US 1971371 A 19340828 - DONNELLY JOHN H
- [A] US 3412910 A 19681126 - WOLFGANG HAHN
- [A] PATENT ABSTRACTS OF JAPAN vol. 1995, no. 11 26 December 1995 (1995-12-26)

Cited by

CN111225858A; AU2001296543B2; CN104609009A; DE102005045809A1; EP1414651A4; DE10214726A1; DE10214726B4; DE10214726B9; EP1800870A2; WO03082695A2; WO0228641A1; US6547108B2; WO03021139A2

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DOCDB simple family (publication)

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DOCDB simple family (application)

**EP 99117702 A 19990908**; AT 99117702 T 19990908; AU 6313699 A 19991202; CA 2291491 A 19991203; DE 19936482 A 19990803; DE 59900454 T 19990908; ES 99117702 T 19990908; JP 34571099 A 19991206; US 44934899 A 19991124