

Title (en)

ONE-WAY VALVE FOR DELIVERING A FREE-FLOWING MATERIAL

Title (de)

EINWEGVENTIL ZUR ABGABE EINES FLIESSFÄHIGEN MATERIALS

Title (fr)

VALVE UNIDIRECTIONNELLE PERMETTANT DE CEDER UNE MATIERE APTE A L'ECOULEMENT

Publication

**EP 1499538 A2 20050126 (DE)**

Application

**EP 03746804 A 20030404**

Priority

- DE 0301108 W 20030404
- DE 10217655 A 20020419

Abstract (en)

[origin: WO03089325A2] The invention relates to a one-way valve for repeatedly delivering a free-flowing material, in a manner the prevents the material from being recontaminated, out of a container whose volume can preferably be reduced. Said one-way valve has a valve seat. This valve seat is made of a rigid plastic, is placed in the container neck, contains a base body, which rests against the inner wall of the container neck and has at least one through hole, and contains a projection extending in the axial direction of the container neck toward the discharge opening. An elastic seal is placed over the valve seat and has an annular section, which covers the at least one through hole, and a sleeve-like section, which surrounds the projection at a radial distance with the exception of its end section that, when the valve is closed in the discharge opening, rests against the end section of the projection. A sterilizing element made of silver or of another oligodynamically effective metal can be placed in the space between the projection of the valve seat and the elastic seal. The exertion of pressure onto the container contents results in the annular section of the seal freeing the at least one through hole of the valve seat, whereby the end section of the sleeve-like part of the seal exits from the discharge opening while freeing the same. Afterwards, the seal returns into the initial state. The container contents are reliably sealed from entering contaminants.

IPC 1-7

**B65D 47/20**

IPC 8 full level

**B65D 1/00** (2006.01); **B65D 47/20** (2006.01); **B65D 81/24** (2006.01)

CPC (source: EP US)

**B65D 47/2081** (2013.01 - EP US); **B65D 81/24** (2013.01 - EP US)

Citation (search report)

See references of WO 03089325A2

Cited by

DE102009048476B3; CN102030138A; EP2308768A1; EP2420455A1; EP2420456A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)

**WO 03089325 A2 20031030; WO 03089325 A3 20040212**; AT E381498 T1 20080115; AU 2003232591 A1 20031103; BR 0309423 A 20050201; BR 0309423 B1 20120807; CN 100379653 C 20080409; CN 1671602 A 20050921; DE 10217655 A1 20031106; DE 10217655 B4 20040527; DE 50308847 D1 20080131; DK 1499538 T3 20080428; EP 1499538 A2 20050126; EP 1499538 B1 20071219; ES 2298541 T3 20080516; MX PA04010304 A 20050307; PT 1499538 E 20080318; RU 2004133809 A 20050420; RU 2326795 C2 20080620; US 2005224520 A1 20051013; US 8322578 B2 20121204

DOCDB simple family (application)

**DE 0301108 W 20030404**; AT 03746804 T 20030404; AU 2003232591 A 20030404; BR 0309423 A 20030404; CN 03808745 A 20030404; DE 10217655 A 20020419; DE 50308847 T 20030404; DK 03746804 T 20030404; EP 03746804 A 20030404; ES 03746804 T 20030404; MX PA04010304 A 20030404; PT 03746804 T 20030404; RU 2004133809 A 20030404; US 51192805 A 20050428