

Title (en)

Tamper-evident bung seal for bung container

Title (de)

Spundstopfen-Originalitätsverschluss für Spundbehälter

Title (fr)

Fermeture à bouchon de bonde inviolable pour récipients à bonde

Publication

**EP 2256056 A1 20101201 (DE)**

Application

**EP 10162832 A 20100514**

Priority

DE 102009022800 A 20090527

Abstract (en)

The closure plug (1) has an elastic clamping sleeve (16) fastened to an inner side (13) of a sealing cap disk (14). The sleeve has an annular locking element (18) radially protruded into the cavity to lock the sleeve with a ring segment-like counter-locking element (19). Outer diameter (D1) of the locking element is approximately equal to diameter (D2) of a cylinder segment-like inner wall (21) such that the locking element at an inner end (17) of the sleeve is guided before locking with the counter-locking element by the inner wall during fixing a sealing cap (5) on a bung-hole plug (4).

Abstract (de)

Die Erfindung betrifft einen Spundstopfenverschluss (1) mit einem Spundstopfen (4) und einer Siegelkappe (5) für Spundbehälter (2), der insbesondere zum maschinellen Verschließen von Spundfässern in automatischen Abfüllanlagen für Flüssigkeiten geeignet ist. Erfindungsgemäß ist der Spundstopfenverschluss (1) mit einer verrastbaren Klemmhülse (16) ausgestattet, die den Nachweis von Manipulationen unterstützt.

IPC 8 full level

**B65D 39/08** (2006.01); **B65D 55/02** (2006.01); **B65D 55/06** (2006.01)

CPC (source: EP US)

**B65D 39/088** (2013.01 - EP US); **B65D 41/48** (2013.01 - EP US); **B65D 55/024** (2013.01 - EP US); **B65D 55/0863** (2013.01 - EP US)

Citation (applicant)

EP 1697224 B1 20080625 - AMERICAN FLANGE & MFG [US]

Citation (search report)

- [A] WO 2008139196 A1 20081120 - GREIF INT HOLDING BV [NL], et al
- [A] US 5348184 A 19940920 - ADAMS BRIAN M [US], et al
- [A] EP 1514806 A2 20050316 - RIEKE CORP [US]
- [A] DE 102008016320 B3 20090430 - KHS AG [DE]

Cited by

AU2019221337B2; CN106163937A; KR20190083662A; CN110177745A; KR20200099589A; CN111712439A; JP2021512821A; US11352174B2; WO2019158283A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

Designated extension state (EPC)

BA ME RS

DOCDB simple family (publication)

**DE 102009022800 B3 20100819**; AT E513754 T1 20110715; EP 2256056 A1 20101201; EP 2256056 B1 20110622; EP 2256056 B2 20180704; ES 2368480 T3 20111117; ES 2368480 T5 20181116; KR 101231102 B1 20130207; KR 20100128235 A 20101207; SA 110310389 B1 20131222; US 10059490 B2 20180828; US 2010301046 A1 20101202; US 2017152077 A1 20170601

DOCDB simple family (application)

**DE 102009022800 A 20090527**; AT 10162832 T 20100514; EP 10162832 A 20100514; ES 10162832 T 20100514; KR 20100047126 A 20100519; SA 110310389 A 20100517; US 201715412602 A 20170123; US 78745810 A 20100526