

Title (en)

Discharge device for flowable media using a piston pump

Title (de)

Austragvorrichtung für fließfähige Medien mittels einer Schubkolbenpumpe

Title (fr)

Dispositif de décharge de fluides utilisant une pompe à piston

Publication

EP 1219356 B1 20100728 (DE)

Application

EP 02007105 A 19980108

Priority

- DE 19700437 A 19970109
- DE 19723133 A 19970603
- EP 98904040 A 19980108

Abstract (en)

[origin: EP1219356A2] The spray may be used eg. as a nasal spray. It has the medication stored in a sealed reservoir which is punctured by a hollow needle when the pump action is operated. This has finger-grips to operate using the thumb and first two fingers. The first pump action is limited by internal stops. The second pump action follows a simple twist of the applicator and a pump action to the bottom of the pump travel. The spray delivers two equal doses in two separate pump actions eg. a precise nasal spray for migraine.

IPC 8 full level

A61M 15/00 (2006.01); **B05B 11/02** (2006.01); **B05B 11/00** (2006.01); **B05B 15/06** (2006.01); **B05B 15/652** (2018.01); **B65D 47/34** (2006.01); **B67D 1/12** (2006.01)

CPC (source: EP KR US)

B05B 11/02 (2013.01 - EP KR US); **B05B 15/652** (2018.02 - EP US); **B05B 11/0044** (2018.08 - EP)

Cited by

DE102012203866A1; DE10321902A1; CN102671269A; DE102012203866B4; US7104469B2; US8590750B2; WO2013054076A1; US9314808B2; US10272213B2

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WO 9830335 A1 19980716; AT E219391 T1 20020715; AT E277689 T1 20041015; AT E475487 T1 20100815; AU 6207598 A 19980803; AU 6987498 A 19981210; AU 734535 B2 20010614; AU 740121 B2 20011101; BR 9801755 A 19990601; BR 9807065 A 20000502; CA 2277208 A1 19980716; CA 2277208 C 20071211; CN 1103642 C 20030326; CN 1250398 A 20000412; DE 19723133 A1 19981210; DE 29824620 U1 20011115; DE 59804505 D1 20020725; DE 59812015 D1 20041104; DE 59814459 D1 20100909; DK 0882516 T3 20050117; DK 0951362 T3 20020715; EP 0882516 A1 19981209; EP 0882516 B1 20040929; EP 0951362 A1 19991027; EP 0951362 B1 20020619; EP 1219356 A2 20020703; EP 1219356 A3 20020828; EP 1219356 B1 20100728; ES 2176960 T3 20021201; JP 2001509070 A 20010710; JP 4046769 B2 20080213; JP H10338298 A 19981222; KR 100492350 B1 20050531; KR 100559101 B1 20060725; KR 19990006599 A 19990125; KR 20000069945 A 20001125; PT 951362 E 20021129; US 6059150 A 20000509; US 6321942 B1 20011127

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