

Title (en)  
PUMPING DEVICE

Publication  
**EP 0262484 A3 19890802 (DE)**

Application  
**EP 87113228 A 19870910**

Priority  
• DE 3633173 A 19860930  
• DE 3722553 A 19870708

Abstract (en)  
[origin: US4858788A] A dispensing device for the discharge of liquids, particularly for the spraying of liquids, having a manually actuatable liquid dispensing device (E). For the continuous delivery of liquid the dispensing device is connected to a storage chamber (Sp) which is under volume contraction and with which an outlet (19) for the stored liquid communicates. In particular, at least one wall (Wa) of the storage chamber (Sp) can cooperate with a spring (47) having flip-flop (snap) action with residual restoring force and a control valve (V4) on the outlet side is shifted into its open position in said flopped-over position.

IPC 1-7  
**B65B 11/00**

IPC 8 full level  
**B05B 9/08** (2006.01); **B05B 11/00** (2006.01); **B65D 47/34** (2006.01)

CPC (source: EP KR US)  
**B05B 1/10** (2013.01 - KR); **B05B 9/0883** (2013.01 - EP US); **B05B 11/1011** (2023.01 - EP US); **B05B 11/1038** (2023.01 - EP US);  
**B05B 11/1039** (2023.01 - EP US)

Citation (search report)  
• [X] FR 2366879 A1 19780505 - PAULS LTD JAMES D [US]  
• [X] US 4591077 A 19860527 - CORSETTE DOUGLAS F [US]  
• [X] WO 8000314 A1 19800306 - PAULS LTD JAMES D [US]  
• [AD] DE 3509178 A1 19860918 - MEGA PROD VERPACK MARKETING [DE]  
• [A] GB 2005344 A 19790419 - UNILEVER LTD

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Designated contracting state (EPC)  
AT BE CH DE ES FR GB GR IT LI LU NL SE

DOCDB simple family (publication)  
**EP 0262484 A2 19880406**; **EP 0262484 A3 19890802**; BR 8705023 A 19880524; CN 87106640 A 19880413; KR 880003672 A 19880528;  
PT 85816 A 19881014; US 4858788 A 19890822

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**EP 87113228 A 19870910**; BR 8705023 A 19870929; CN 87106640 A 19870930; KR 870010962 A 19870930; PT 8581687 A 19870929;  
US 10112087 A 19870925