

Title (en)  
Pump for fluid dispensers

Title (de)  
Pumpe für Flüssigkeitsspende

Title (fr)  
Pompe pour distributeur de liquide

Publication  
**EP 1598118 A1 20051123 (EN)**

Application  
**EP 04253005 A 20040521**

Priority  
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Abstract (en)  
The invention herein relates to pumps and valving arrangements for fluid dispensers. The pumps herein comprise a dose chamber, a resilient actuator, valves for controlling the flow of fluid into and out of the dose chamber and the upper and lower pump halves each formed from unitary mouldings, at least the upper pump half comprising a semirigid, thermoplastic material. The pumps are easily made via injection moulding from a small number of parts. Combination of the pump with a fluid reservoir provides a fluid dispenser which may further comprise an atomiser for forming a spray as fluid is ejected from a dispenser outlet. Methods of making the pump and valving arrangements are also provided by the invention.  
<IMAGE>

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**B05B 11/00444** (2018.07 - EP US); **B05B 11/1032** (2023.01 - EP US); **B05B 11/1033** (2023.01 - EP US)

Citation (search report)

- [X] FR 2127774 A5 19721013 - POLYPUMP CURACAO NV
- [X] GB 2211251 A 19890628 - PROCTER & GAMBLE [US]
- [X] US 3843025 A 19741022 - HOLT W
- [X] US 3726442 A 19730410 - DAVIDSON T, et al
- [X] US 3986644 A 19761019 - GROGAN RICHARD P, et al
- [X] US 5273191 A 19931228 - MESHBERG PHILIP [US]
- [X] WO 03076079 A1 20030918 - CROWN CORK & SEAL TECH CORP [US], et al
- [XA] US 5845817 A 19981208 - NILSON BILLY [SE]
- [AD] EP 0641722 A2 19950308 - ASEPT INT AB [SE]
- [AD] EP 0442858 A2 19910821 - STERISOL AB [SE]
- [A] PATENT ABSTRACTS OF JAPAN vol. 2000, no. 07 29 September 2000 (2000-09-29)

Cited by  
CN104368463A; EP2181771A1; DE102006027042A1; EP1779933A1; EP3135387A1; FR3040270A1; DE102007025387A1; US8534500B2

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