

Title (en)  
APPARATUS FOR FILLING FIXED AMOUNT OF LIQUID INTO CONTAINERS

Publication  
**EP 0138234 B1 19880330 (EN)**

Application  
**EP 84200100 A 19840126**

Priority  
JP 15219983 A 19830819

Abstract (en)  
[origin: EP0138234A1] A filling apparatus comprising a machine main body (1) and a high-viscosity liquid nozzle (2), the machine main body comprising a liquid tank (4), a filling cylinder (6) having an upper end portion (10) extending upward through the bottom wall (5) of the tank and communicating with the tank, and a metering cylinder (7) communicating with an intermediate portion of the filling cylinder, the filling cylinder being formed at the projecting portion with a high-viscosity liquid inlet (13) open to the interior of the tank and having fitted therein a piston (16) for opening or closing the inlet. The high-viscosity liquid nozzle (2) includes a tubular nozzle main body (49) attached at its upper end to the lower end of the filling cylinder, a damper (50) pivoted to the lower end of the nozzle main body, a damper opening rod (51) vertically movably supported by the nozzle main body, and a spring (52) for biasing the damper opening rod upward. The damper opening rod has a lower end connected to the damper and an upper end projecting into a space in which the piston (16) moves down so that the damper opening rod (51) is depressed by the downward movement of the piston by a distance to open the damper.

IPC 1-7  
**B67C 3/20**; **B65B 3/12**

IPC 8 full level  
**B67C 3/02** (2006.01); **B65B 3/12** (2006.01); **B65B 3/32** (2006.01); **B65B 3/36** (2006.01); **B65B 39/00** (2006.01); **B67C 3/28** (2006.01); **E03F 3/04** (2006.01)

CPC (source: EP)  
**B65B 39/002** (2013.01); **B65B 2039/008** (2013.01)

Citation (examination)  
• AT 345685 B 19780925 - JAGENBERG WERKE AG [DE]  
• DE 1550118 A1 19691218 - BARGER MFG CO INC  
• GB 1053983 A  
• US 3285300 A 19661115 - MISTARZ ROBERT J  
• DE 1453526 A1 19690227 - HAMBA MASCHF  
• AT 242023 B 19650825 - HOLSTEIN & KAPPERT MASCHF [DE]

Cited by  
CN112479137A; EP0275569A3; EP0234102A1; US4905744A; CN102032220A; CN112374442A; EP0287179A1; US4958669A; EP0303331A1; US4982770A; US4995431A; EP0402535A1; US5016687A; EP0278560A1; CN105217552A; CN118387823A

Designated contracting state (EPC)  
DE FR GB NL SE

DOCDB simple family (publication)  
**EP 0138234 A1 19850424**; **EP 0138234 B1 19880330**; DE 3470147 D1 19880505; JP S6045192 A 19850311; JP S6258961 B2 19871209

DOCDB simple family (application)  
**EP 84200100 A 19840126**; DE 3470147 T 19840126; JP 15219983 A 19830819