

Title (en)
HAND HOLDABLE PUMP SPRAY APPARATUS

Title (de)
VON HAND BETÄTIGBARES PUMP-SPRÜHGERÄT

Title (fr)
APPAREIL PORTATIF DE VAPORISATION A POMPE

Publication
EP 1254072 A1 20021106 (EN)

Application
EP 00984023 A 20001207

Priority
• US 0033233 W 20001207
• US 45717199 A 19991208
• US 72306700 A 20001127

Abstract (en)
[origin: WO0142129A1] A hand holdable pump spray apparatus is disclosed where the pump mechanism is in the hand holdable wand (14) rather than in a spaced apart liquid container. The wand (14) may be held with one handle (54) is extended with other hand. This creates a pressure differential which allows liquid to flow from the container (10), passed a check valve (84) and into the wand (14). After filling, a biased spring provides a force against the liquid creating a higher pressure in the wand (14) than ambient pressure. This closes the check valve (84). When an operator depresses an actuator (68), another valve (88) opens allowing the liquid in the wand (14) to be ejected through a nozzle (66).

IPC 1-7
B67D 1/16

IPC 8 full level
B05B 9/04 (2006.01); **B65D 83/76** (2006.01); **B05B 9/043** (2006.01); **B67D 1/16** (2006.01); **B05B 9/08** (2006.01); **B05B 11/00** (2006.01)

CPC (source: EP)
B05B 9/0426 (2013.01); **B05B 9/043** (2013.01); **B05B 9/0877** (2013.01); **B05B 9/0883** (2013.01); **B05B 11/1015** (2023.01);
B05B 11/1091 (2023.01); **B05B 1/3033** (2013.01)

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)
WO 0142129 A1 20010614; AT E380158 T1 20071215; AU 2070301 A 20010618; AU 759592 B2 20030417; AU 759592 C 20031030; CA 2393687 A1 20010614; CA 2393687 C 20061003; CN 1221321 C 20051005; CN 1414922 A 20030430; CZ 20021931 A3 20030115; DK 1254072 T3 20080414; EP 1254072 A1 20021106; EP 1254072 A4 20060315; EP 1254072 B1 20071205; ES 2296664 T3 20080501; HU P0203272 A2 20030128; HU P0203272 A3 20040528; IL 150078 A0 20021201; JP 2003516228 A 20030513; JP 4377097 B2 20091202; MX PA02005658 A 20021129; NO 20022745 D0 20020607; NO 20022745 L 20020807; NZ 519481 A 20040227; PL 193683 B1 20070330; PL 355996 A1 20040531

DOCDB simple family (application)
US 0033233 W 20001207; AT 00984023 T 20001207; AU 2070301 A 20001207; CA 2393687 A 20001207; CN 00817884 A 20001207; CZ 20021931 A 20001207; DK 00984023 T 20001207; EP 00984023 A 20001207; ES 00984023 T 20001207; HU P0203272 A 20001207; IL 15007800 A 20001207; JP 2001543437 A 20001207; MX PA02005658 A 20001207; NO 20022745 A 20020607; NZ 51948100 A 20001207; PL 35599600 A 20001207