

Title (en)

PRECOMPRESSION HAND PUMP FOR THE SPRAYING OF A LIQUID, IN PARTICULAR A PERFUME

Publication

EP 0437131 B1 19930908 (FR)

Application

EP 90403622 A 19901217

Priority

FR 9000226 A 19900110

Abstract (en)

[origin: EP0437131A1] The pump (1) comprises: a body (4) fitted with an end piece (9) for connecting to a plunger tube (13), equipped with an inlet valve (15); a cylinder (16) suitable for sliding in the body through the action of a push button (17) pushed in by the user, in opposition to elastic return means (18); a lower piston (34) linked to the cylinder. The lower piston (34) comprises a central passage (35) in which, approximately at mid-height, arms (36) extend radially and form a kind of star, these arms (36) carrying a central rod (37) which is coaxial with the piston (34) and of smaller diameter, elastic means for returning the cylinder (16) and the lower piston (34) being constituted by a helical spring (18), one end of which is engaged in the central passage of the piston (34) and bears against the radial arms (36) and the other end of which bears against a stop (s) integral with the internal wall of the body (4). <IMAGE>

IPC 1-7

B05B 1/34; B05B 11/00

IPC 8 full level

B05B 9/04 (2006.01); **B05B 1/34** (2006.01); **B05B 11/00** (2006.01); **B65D 47/34** (2006.01); **F04B 9/14** (2006.01); **F04B 13/00** (2006.01)

CPC (source: EP)

B05B 1/3436 (2013.01); **B05B 11/0044** (2018.07); **B05B 11/1004** (2023.01); **B05B 11/1016** (2023.01); **B05B 11/1063** (2023.01)

Cited by

ES2075783A2; EP1310305A3; EP0786289A3; AU717120B2; FR3005431A1; EP0765689A1; US5711461A; CN112938151A; EP0536617A1; US5301852A; EP0794923A4; EP0688609A1; WO9505244A1; WO2012156099A1; WO2014184483A1; US10588914B2; US10905697B2; EP0718045A1; US11179465B2

Designated contracting state (EPC)

BE CH DE ES FR GB IT LI

DOCDB simple family (publication)

EP 0437131 A1 19910717; EP 0437131 B1 19930908; CA 2033518 A1 19910711; DE 69003232 D1 19931014; DE 69003232 T2 19940428; ES 2044500 T3 19940101; FR 2656900 A1 19910712; FR 2656900 B1 19940128; JP H06345115 A 19941220

DOCDB simple family (application)

EP 90403622 A 19901217; CA 2033518 A 19910108; DE 69003232 T 19901217; ES 90403622 T 19901217; FR 9000226 A 19900110; JP 18593091 A 19910110