

Title (en)
Improvement to the assembly of a pump in a container

Title (de)
Verbesserung der Anordnung einer Pumpe in einem Behälter

Title (fr)
Perfectionnement à l'assemblage d'une pompe dans un réservoir

Publication
EP 0583193 B1 19970528 (FR)

Application
EP 93402002 A 19930804

Priority
FR 9209881 A 19920810

Abstract (en)
[origin: EP0583193A2] Device for dispensing a fluid substance, including a pump mounted on a cap (plug) (20) intended to be fixed to a neck of a container of the said fluid substance, in which: - the pump includes a pump body (1) extending axially between a first end (1b) which includes an inlet orifice (1d) and an open second end (1c) provided with an outer flange (collar) (12), the pump furthermore includes a piston (2) which slides axially in the said pump body and a return spring (10) which urges the piston (2) towards the open second end (1c) of the pump body, and the pump includes a ferrule (sleeve) (11) formed as a single piece fixed into the said second end (1c) of the pump body, in order to limit the movement of the piston (2) towards the said second end (1c); - the cap (20) includes an axial internal passage (21) which passes through it, the said passage (21) including a first section (22) which is substantially cylindrical towards the outside of the container and a second section (23) which is narrower towards the inside of the container, the said first and second sections defining a shoulder (24) directed towards the outside of the container, the said first section (22) of the passage (21) having an internal diameter essentially equal to the external diameter of the flange (12) of the pump body; - the ferrule (11) includes a ring (11a) which extends radially towards the outside; - the pump body (1) passes through the second section (23) of the internal passage of the cap, and the flange (12) is arranged in the said first section (22) of the internal passage (21) of the cap, in abutment against the shoulder (24) of the cap. The device is characterised in that the said ring (11a) has an external diameter approximately equal to the external diameter of the said flange (12) of the pump body and slightly greater than the internal diameter of the said first section (22), and the said ring (11a) is forcibly fitted into the said first section (22) of the internal passage (21) of the cap, in order to keep the pump in the said cap, thereby preventing the pump body (1) from being moved towards the outside of the container, the ferrule (11) and the cap (20) are made of plastic, and the ferrule (11) is produced in a material which is harder than the cap (20), so that the said radial ring (11a) bites into the said cap. <IMAGE>

IPC 1-7
B05B 11/00

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

CPC (source: EP US)
B05B 11/1018 (2023.01 - EP US); **B05B 11/1047** (2023.01 - EP US)

Cited by
FR2719292A1; US5845819A; WO9529760A1

Designated contracting state (EPC)
DE ES FR GB IT

DOCDB simple family (publication)
EP 0583193 A2 19940216; EP 0583193 A3 19940316; EP 0583193 B1 19970528; DE 69311022 D1 19970703; DE 69311022 T2 19980115; ES 2105162 T3 19971016; FR 2694607 A1 19940211; FR 2694607 B1 19941007; JP 3528133 B2 20040517; JP H07165250 A 19950627; US 5377881 A 19950103

DOCDB simple family (application)
EP 93402002 A 19930804; DE 69311022 T 19930804; ES 93402002 T 19930804; FR 9209881 A 19920810; JP 21683693 A 19930810; US 10226193 A 19930805