

Title (en)  
PRECOMPRESSION PUMP FORMED WITHIN THE PUSHER ELEMENT

Title (de)  
IN DRUCKTASTE EINGEBAUTE VORDRUCKPUMPE

Title (fr)  
POMPE A PRECOMPRESSION FORMEE DANS LE POUSSOIR

Publication  
**EP 0868221 B1 20000802 (FR)**

Application  
**EP 96941079 A 19961129**

Priority  
• FR 9601895 W 19961129  
• FR 9515320 A 19951222

Abstract (en)  
[origin: WO9723304A1] Precompression pump intended to dispense selectively a product contained in a container, said pump comprising a pump chamber (3) having an inlet valve (4), a piston (1) sliding in a first cylinder (2), a differential piston (5) forming an outlet valve of said pump chamber (3) and sliding in a second cylinder (11) between a closing position and an opening position of the pump chamber (3), said pump comprising also a pusher (6) provided with a dispensing orifice (7), said pusher element (6) being movable between a rest position and a pump actuation position, the pump being characterized in that said first and second cylinders (2 and 11) are directly formed by first and second respective internal walls of said pusher (6), the latter delimiting partially said pump chamber (3), the pump being also characterized in that it comprises only one spring (15) bearing on one side on a portion of the pusher (6) and on the other side on a portion of the differential piston (5), said spring (15) acting on the one hand as a return spring for the pusher (6) towards its rest position and on the other hand as a precompression spring for the differential piston (5).

IPC 1-7  
**B05B 11/00**

IPC 8 full level  
**B05B 11/00** (2006.01)

CPC (source: EP US)  
**B05B 11/1004** (2023.01 - EP US); **B05B 11/1007** (2023.01 - EP US); **B05B 11/104** (2023.01 - EP US); **B05B 11/1074** (2023.01 - EP US)

Designated contracting state (EPC)  
DE ES FR GB IT

DOCDB simple family (publication)  
**WO 9723304 A1 19970703**; DE 69609628 D1 20000907; DE 69609628 T2 20010412; EP 0868221 A1 19981007; EP 0868221 B1 20000802; ES 2151189 T3 20001216; FR 2742812 A1 19970627; FR 2742812 B1 19980220; US 6012615 A 20000111

DOCDB simple family (application)  
**FR 9601895 W 19961129**; DE 69609628 T 19961129; EP 96941079 A 19961129; ES 96941079 T 19961129; FR 9515320 A 19951222; US 9190098 A 19980817