

Title (en)

HANDPUMP WHICH CAN BE OPERATED IN ANY POSITION

Publication

**EP 0234969 B1 19891004 (FR)**

Application

**EP 87400071 A 19870114**

Priority

FR 8600604 A 19860117

Abstract (en)

[origin: EP0234969A1] 1. Manually actuated pump capable of use in all attitudes comprising a pump body (1) capable of attachment to the neck (13) of a container (14) enclosing the product (15) to be dispensed, axially extended towards the inside of the container by a tubular spigot on which an axial dip tube (3) is attached which extends down to the floor of the container and communicates with the interior of the body of the pump, the moving element (2) of the pump acted on by a return spring (17) to urge it away from the fixed element (4) of the pump, being joined to an axial manual push button (5) having a nozzle (6) for dispensing the pumped product, in communication with the interior of the body of the pump, a first non-gravity non-return inlet valve (21, 22) being interposed between the dip tube (3) and the body of the pump (1), a gravity-operated valve (26, 28) for preventing admission in the inverted position being interposed between the dip tube and the first valve, and a non-return delivery valve (32, 33) being interposed between the body of the pump (1) and the nozzle (6), the pump being characterised in that it comprises a second non-gravity non-return inlet valve (30, 31) for admission by a bypass (10) between the first valve and the gravity valve and opening in response to downstream depression, the tubular spigot (16) being pierced by a radial bypass hole (10) providing communication between the interior of the container (14) and the interior of the spigot (16) around an open frusto-conical sleeve (30) of which the free end comes into resilient engagement against an annular shoulder (31) on the spigot (16) to constitute the second non-gravity non-return valve for admission bypassing the dip tube (3).

IPC 1-7

**B05B 11/00**

IPC 8 full level

**F04B 9/14** (2006.01); **B05B 11/00** (2006.01)

CPC (source: EP)

**B05B 11/0059** (2013.01)

Cited by

DE4110304A1; EP1525923A1; EP0974533A1; FR2781467A1; EP0377536A1; FR2642499A1; US6186372B1; WO2006037385A1

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