

Title (en)

Handpump which can be operated in any position.

Title (de)

Handbetätigbare, in allen Stellungen benutzbare Pumpe.

Title (fr)

Pompe à commande manuelle utilisable en toutes positions.

Publication

**EP 0234969 A1 19870902 (FR)**

Application

**EP 87400071 A 19870114**

Priority

FR 8600604 A 19860117

Abstract (en)

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).

Abstract (fr)

Pompe comportant un premier clapet (21, 22) antiretour non gravimétrique, d'admission, intercalé entre le tube plongeur (3), et le corps de pompe (1), un clapet gravimétrique (26, 28) d'interdiction d'admission en position retournée intercalé entre le tube plongeur et le premier clapet, un second clapet (30, 31) antiretour non gravimétrique, d'admission par une dérivation (10) entre le premier clapet et le clapet gravimétrique, s'ouvrant en réponse à une dépression aval, et un clapet antiretour (32, 33) de refoulement intercalé entre l'intérieur du corps de pompe (1) et la buse (6).

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)

Citation (search report)

- [Y] GB 2039989 A 19800820 - YOSHINO KOGYOSHO CO LTD
- [Y] DE 2732888 A1 19790201 - ZELLER PLASTIK KOEHN GRAEBNER
- [A] FR 2318685 A1 19770218 - YOSHINO KOGYOSHO CO LTD [JP]
- [A] FR 2542820 A1 19840921 - JORDAN GMBH & CO KG GEB [DE]

Cited by

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