

Title (en)

Device for lifting objects by making use of a sub-atmospheric pressure.

Title (de)

Vorrichtung zum Heben von Gegenständen durch Anwenden von Unterdruck.

Title (fr)

Dispositif pour lever des objets par succion.

Publication

EP 0425010 A1 19910502 (EN)

Application

EP 90202713 A 19901012

Priority

NL 8902652 A 19891026

Abstract (en)

The invention relates to a device for lifting objects (15) by making use of a sub-atmospheric pressure, whereby the device is provided with a chamber (42) in which a sub-atmospheric pressure can be generated. A valve (45) located in said chamber has a valve stem (44) extending to a point beyond the chamber (42), through a passage (43) provided in the bottom wall (40) of the chamber. The lower end of the valve stem (44) is located near an opening (11) surrounded by resilient material (10), which is located at the bottom side of the device. The valve (45) and the valve stem (44) can be put from a first position, in which the passage (43) in the bottom wall (40) of the chamber (42) is closed by the valve, into a second position, in which the valve is located spaced from the bottom wall, and in which the chamber (42) is in open communication with the opening (11) surrounded by the resilient material (10). The valve (45) is secured to the lower end of a bellows-shaped means (46) disposed in the chamber (42), said bellows-shaped means being retained between the valve (45) and a fastening means (47, 48) located spaced from the bottom wall (40) of the chamber (42). The interior of the bellows-shaped means (46) is in open communication, via a passage (49) provided in the valve (45) and in the valve stem (44), with the opening (11) surrounded by the resilient material (10).

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B66C 1/02

IPC 8 full level

B66C 1/02 (2006.01)

CPC (source: EP)

B66C 1/0212 (2013.01); **B66C 1/0293** (2013.01)

Citation (search report)

- [AD] US 4561687 A 19851231 - BOSTROM MARK W [US]
- [X] GB 1249294 A 19711013 - NAT RES DEV [GB]
- [A] US 2783018 A 19570226 - LYTTLE GEORGE F
- [A] DE 3419913 A1 19851128 - KETTNER VERPACKUNGSMASCHF [DE]
- [A] US 3307816 A 19670307 - MICHAEL COCITO JOE
- [A] DE 3325207 A1 19850131 - PETER UHREN GMBH [DE]
- [AD] FR 2265659 A1 19751024 - BARBE GASTON [FR]
- [AD] US 4787662 A 19881129 - DEWEZ JOHN F [US]
- [A] DE 2354898 A1 19740912 - OTHENE INTERNAT HANDELMIJ B V

Cited by

CN110255347A

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