

Title (en)

Double-acting positive displacement pump.

Title (de)

Doppelwirkende Verdrängerpumpe.

Title (fr)

Pompe à déplacement positif à double effet.

Publication

**EP 0451942 A1 19911016 (EN)**

Application

**EP 91301762 A 19910304**

Priority

US 50836890 A 19900411

Abstract (en)

A double-acting positive displacement pump (10) has the piston rod (42) and piston (22) sized so as to balance the dynamic forces generated in the pump, resulting in substantially equal output pressure on both the downstroke and upstroke of the pump. <IMAGE>

IPC 1-7

**F04B 5/00**; **F04B 9/12**; **F04B 11/00**

IPC 8 full level

**F04B 13/02** (2006.01); **F04B 5/02** (2006.01); **F04B 9/129** (2006.01); **F04B 11/00** (2006.01)

CPC (source: EP)

**F04B 5/02** (2013.01); **F04B 9/1295** (2013.01); **F04B 11/0083** (2013.01)

Citation (search report)

- [A] FR 2161476 A5 19730706 - GRAHAM GEORGE
- [A] FR 2228389 A5 19741129 - HALE JEAN CLAUDE [FR]
- [A] US 3160105 A 19641208 - SHERMAN KENNETH S, et al
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Designated contracting state (EPC)

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