

Title (en)
Piston pump with multiple pistons

Title (de)
Kolbenpumpe mit mehreren Kolben

Title (fr)
Pompe à pistons à plusieurs pistons

Publication
EP 2278161 A3 20111130 (DE)

Application
EP 10001073 A 20100203

Priority
DE 202009003133 U 20090309

Abstract (en)
[origin: EP2278161A2] The pump (1) has a set of pistons (6, 7) driven by an eccentric cam (4), where the eccentric cam exerts a compressive force on the pistons. The pistons are connected with each other by a single-piece u-shaped bent pin element i.e. clip (8), that absorbs tractive forces in the operation of the piston pump. The pistons execute a reciprocating movement by the eccentric cam, where the pistons are displaceable to a starting position during the movement by the pin element. The pin element is connected with each piston by a detachable plug connection.

IPC 8 full level
F04B 1/04 (2006.01); **F04B 1/053** (2006.01); **F04B 9/04** (2006.01)

CPC (source: EP)
F04B 1/0413 (2013.01); **F04B 1/0426** (2013.01); **F04B 1/0439** (2013.01); **F04B 1/053** (2013.01); **F04B 9/042** (2013.01); **F04B 9/045** (2013.01); **F05B 2230/41** (2013.01); **F05C 2253/12** (2013.01)

Citation (search report)

- [X] DE 2243137 A1 19740314 - LANGEN & CO
- [X] US 2271570 A 19420203 - PARDEE HARVEY S
- [X] DE 19503621 A1 19960808 - BOSCH GMBH ROBERT [DE]
- [X] EP 0666418 A1 19950809 - BOSCH GMBH ROBERT [DE]
- [A] DE 19635164 A1 19980305 - BOSCH GMBH ROBERT [DE]

Cited by
CN105370560A

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

Designated extension state (EPC)
AL BA RS

DOCDB simple family (publication)
DE 202009003133 U1 20090604; EP 2278161 A2 20110126; EP 2278161 A3 20111130

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DE 202009003133 U 20090309; EP 10001073 A 20100203