

Title (en)
Drive for a gripping device

Title (de)
Antriebsvorrichtung für eine Greifeinrichtung

Title (fr)
Entraînement pour un dispositif de préhension

Publication
EP 1247777 A3 20050427 (DE)

Application
EP 02006916 A 20020326

Priority
• DE 20105755 U 20010402
• DE 20107206 U 20010426

Abstract (en)
[origin: US2002158479A1] A drive apparatus for a grab device comprising two grab arms, which can be moved like pincers, preferably for a two bucket grab, consists of two hydraulic pivot motors whose shaft journals of the pivot shaft projecting over the motor housing carry the grab arms. Each of the pivot motors has a cylindrical tube piece which is provided at its inner wall with a section which is provided with an internal thread and which is in engagement with a section of the pivot shaft provided with an external thread. The tube piece is a ring piston axially displaceable in but held non-rotatably in a cylinder space formed in one of the housings. The pitch of the threads is so large that the ring piston is able to give the pivot shafts the required torque by its axial displacement. The displacement path of the ring piston between the two annular cylinder chambers, which are alternatively high and low pressure chambers which can be loaded with hydraulic oil, corresponds to the desired pivot angle of the two buckets.

IPC 1-7
B66C 3/02; **B66C 3/16**; **E02F 3/413**; **F15B 15/08**; **E02F 3/40**

IPC 8 full level
B66C 3/16 (2006.01); **E02F 3/40** (2006.01); **E02F 3/42** (2006.01)

CPC (source: EP US)
B66C 3/16 (2013.01 - EP US); **E02F 3/413** (2013.01 - EP US); **E02F 9/006** (2013.01 - EP US); **Y10T 74/19823** (2015.01 - EP US)

Citation (search report)
• [YA] DE 29621601 U1 19980409 - KINSHOFER GREIFTECHNIK [DE]
• [YA] US 4603616 A 19860805 - ZAJAC THEODORE S [US]
• [A] US 3133476 A 19640519 - GEYER HOWARD M
• [A] DE 3601220 C1 19930325 - POST HERMANN
• [A] US 4654987 A 19870407 - KINSHOFER ALFRED [DE]

Cited by
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Designated contracting state (EPC)
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US 2002158479 A1 20021031; **US 6896306 B2 20050524**; AT E423744 T1 20090315; CA 2380024 A1 20021002; CA 2380024 C 20091215; DE 20107206 U1 20020808; DE 50213307 D1 20090409; DK 1247777 T3 20090414; EP 1247777 A2 20021009; EP 1247777 A3 20050427; EP 1247777 B1 20090225; ES 2319388 T3 20090507; NO 20021421 D0 20020321; NO 20021421 L 20021003; NO 330224 B1 20110307

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