

Title (en)  
MANIPULATOR FOR POSITIONNING WORKPIECES OR OTHER LOADS

Publication  
**EP 0000877 B1 19830518 (DE)**

Application  
**EP 78100560 A 19780801**

Priority  
• DE 2739136 A 19770831  
• DE 2742163 A 19770920  
• DE 2745404 A 19771008  
• DE 2814228 A 19780403  
• US 20948280 A 19801124  
• US 94348978 A 19780918

Abstract (en)  
[origin: EP0000877A1] 1. Manipulator (1) for positioning workpieces (2) or other loads with the aid of a pivotable jib (3), on which a lifting device (4) is arranged at a fixed angle and which lifting device is provided with load holding elements (5) and means which controllably change the spacing of the load holding elements (5) from the pivot axis (6) of the jib (3), characterised in that the pivot axis (6) of the jib (3) is arranged to be substantially vertical and is allocated a hinge (7) having a controllable brake (8), that the lifting device (4) consists of an outer telescopic component (9) which is displaceable in relation to the jib (3) in the direction of the longitudinal axis of the lifting device (4) and consists of at least one inner telescopic component (11) which is axially displaceable in relation to the outer telescopic component (9) by means of a ball-type worm gear (10), that at the free end (12) of the lifting device (4) is arranged a connection block (13) so as to be rotatable about the longitudinal axis of the lifting device (4), which connection block possesses connection surfaces (14), between which and the load holding elements (5) is arranged at least one spacing element (15), on which the load holding elements (5) are rotatably and/or pivotably arranged and driving means (16) for this movement are arranged in the spacing element (15).

IPC 1-7  
**B25J 11/00**

IPC 8 full level  
**B25J 9/04** (2006.01); **B25J 9/10** (2006.01); **B25J 15/00** (2006.01); **B25J 15/02** (2006.01); **B25J 18/02** (2006.01); **B25J 19/00** (2006.01); **F16H 25/20** (2006.01); **F16H 25/22** (2006.01)

CPC (source: EP US)  
**B25J 9/04** (2013.01 - EP US); **B25J 9/044** (2013.01 - EP US); **B25J 9/10** (2013.01 - EP US); **B25J 9/101** (2013.01 - EP US); **B25J 15/0028** (2013.01 - EP US); **B25J 15/022** (2013.01 - EP US); **B25J 18/025** (2013.01 - EP US); **B25J 19/0091** (2013.01 - EP US); **F16H 25/2015** (2013.01 - EP US); **F16H 25/2021** (2013.01 - EP US); **F16H 25/2204** (2013.01 - EP US); **F16H 2025/2075** (2013.01 - EP US); **F16H 2025/2087** (2013.01 - EP US)

Citation (examination)  
• DE 1456421 A1 19690123 - BLATT LELAND F  
• DE 2420240 A1 19750102 - REIS WALTER  
• US 4042122 A 19770816 - ESPY DONALD M, et al  
• US 4015721 A 19770405 - SCHELER HOLGER  
• US 1903916 A 19330418 - THOMAS STENHOUSE, et al  
• US 3834557 A 19740910 - DEVILLERS J

Cited by  
EP0090357A3; CN103640026A; CN106064728A; CN104440895A; CN106313032A; EP0102082A3; CN111115223A; CN109794928A; EP0009121A1; EP0237137A3; CN103128740A; FR2442781A1; CN105835049A; EP2620673A1; FR2504441A1; EP0012237A1; EP0108657A3; US4697472A; CN106865225A; DE102020113046A1; US8986159B2; EP0121843A1; EP0008386A1; AU570660B2; CN108582102A; CN109625935A; CN109843476A; EP3530376A4; WO9608347A1; WO8101372A1; EP3575794A1

Designated contracting state (EPC)  
BE CH DE FR GB NL SE

DOCDB simple family (publication)  
**EP 0000877 A1 19790307**; **EP 0000877 B1 19830518**; BE 898154 A 19840301; EP 0132442 A1 19850213; EP 0137050 A1 19850417; US 4428710 A 19840131

DOCDB simple family (application)  
**EP 78100560 A 19780801**; BE 211822 A 19831104; EP 81108902 A 19780801; EP 81108994 A 19780801; US 20948280 A 19801124