

Title (en)

SPINDLE ARRANGEMENT FOR CLAMPING A TOOL OR A WORKPIECE IN PLACE AND METHOD FOR OPERATING THE SPINDLE ARRANGEMENT

Title (de)

ACHSANORDNUNG ZUM EINSPANNEN EINES WERKZEUGS ODER EINES WERKSTÜCKS UND VERFAHREN ZUM BETREIBEN DER ACHSANORDNUNG

Title (fr)

ENSEMBLE D'AXE POUR SERRER UN OUTIL OU UNE PIÈCE DE TRAVAIL ET PROCÉDÉ D'EXPLOITATION DE L'ENSEMBLE D'AXE

Publication

EP 3386665 A1 20181017 (DE)

Application

EP 16797880 A 20161116

Priority

- DE 102015121228 A 20151207
- EP 2016077895 W 20161116

Abstract (en)

[origin: WO2017097556A1] The invention relates to a spindle arrangement (10) for clamping a tool or a workpiece in place. The spindle arrangement (10) has a receiving unit (12) which is mounted in a basic body (11) by a pivot bearing arrangement (13) so as to be rotatable about a longitudinal axis L. The receiving unit (12) has a receiving sleeve (18) that is mounted immovably parallel to the longitudinal axis L in the longitudinal direction R and a gripper actuating element (23) that is mounted in the receiving sleeve (18) so as to be displaceable along the longitudinal axis L. Fitted at an end, assigned to the front end (18a) of the receiving sleeve (18), of the gripper actuating element (23) is a gripping unit (24) for gripping the tool or the workpiece. The gripping unit (24) is pretensioned into a clamping position I by a pretensioning unit (30). An actuatable releasing unit (34) can move the gripping unit (24) counter to the pretensioning force FV of the pretensioning unit (30) into a releasing position II. By means of a supporting unit (48), an additional bearing (49), which is embodied in particular as an axial bearing, can be pushed against the receiving sleeve (18), in order to achieve better axial force support of the receiving unit (12) on the basic body (11) and to reduce the loading of the pivot bearing arrangement (13) by axial forces.

IPC 8 full level

B23B 31/26 (2006.01); **B23B 31/20** (2006.01)

CPC (source: EP KR US)

B23B 31/2072 (2021.01 - EP KR US); **B23B 31/261** (2013.01 - EP KR US); **B23B 2231/50** (2013.01 - EP KR US);
B23B 2260/008 (2013.01 - EP US); **B23B 2260/0087** (2013.01 - EP KR US); **B23B 2270/027** (2013.01 - EP KR US);
Y10T 409/309464 (2015.01 - EP US)

Citation (search report)

See references of WO 2017097556A1

Designated contracting state (EPC)

AL 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 RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

DE 102015121228 B3 20170504; AU 2016368964 A1 20180726; AU 2016368964 B2 20190919; CN 108290228 A 20180717;
EP 3386665 A1 20181017; JP 2019501783 A 20190124; KR 20180088829 A 20180807; TW 201726294 A 20170801;
US 2018318938 A1 20181108; WO 2017097556 A1 20170615

DOCDB simple family (application)

DE 102015121228 A 20151207; AU 2016368964 A 20161116; CN 201680071357 A 20161116; EP 16797880 A 20161116;
EP 2016077895 W 20161116; JP 2018529244 A 20161116; KR 20187015973 A 20161116; TW 105131476 A 20160930;
US 201615779918 A 20161116