

Title (en)

Toggle clamp, in particular for use in car bodywork construction

Title (de)

Kniehebelspannvorrichtung, insbesondere zur Verwendung im Karosseriebau der Kfz-Industrie

Title (fr)

Dispositif de serrage à genouillère, en particulier pour la construction en carrosserie dans l'industrie automobile

Publication

EP 0962285 B1 20060705 (DE)

Application

EP 98124288 A 19981221

Priority

DE 19824579 A 19980602

Abstract (en)

[origin: US6220588B1] A toggle clamping device or piston-cylinder unit including mechanism for adjusting the opening angle of the clamping arm. Within the cylinder there are a number of interrogator devices that function to determine the position of pistons within the cylinder and transmit this information to a micro processor. The location of the interrogator devices can be adjusted. Also within the cylinder there are damping mechanism, the location of which can also be adjusted. When the toggle clamping device is in use, the opening angle of the clamping arm, the final-position of the interrogator devices and the final-position of the damping mechanism can be adjusted and locked simultaneously and jointly through a single adjusting element from the outside of the device without dismantling the toggle clamping device.

IPC 8 full level

B25B 5/12 (2006.01); **B25B 5/06** (2006.01); **B25B 5/16** (2006.01); **F15B 15/22** (2006.01); **F15B 15/24** (2006.01); **F15B 15/28** (2006.01); **F16F 9/02** (2006.01); **F16F 9/48** (2006.01); **F16F 15/023** (2006.01)

CPC (source: EP US)

B25B 5/061 (2013.01 - US); **B25B 5/064** (2013.01 - EP); **B25B 5/122** (2013.01 - EP US); **B25B 5/16** (2013.01 - EP US); **F15B 15/22** (2013.01 - EP US); **F15B 15/223** (2013.01 - EP US); **F15B 15/24** (2013.01 - EP US); **F15B 15/2807** (2013.01 - EP US)

Cited by

DE102014107267A1; DE102014107267B4; CN110539189A; EP1952946A3; DE102004007346B3; FR2831617A1; EP2602060A1; EP2602061A2; DE202014102804U1; WO2015177291A1; US10688626B2

Designated contracting state (EPC)

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DOCDB simple family (publication)

US 6220588 B1 20010424; AT E332212 T1 20060715; DE 19824579 C1 19990617; DE 29811901 U1 19981008; DE 59813632 D1 20060817; EP 0962285 A2 19991208; EP 0962285 A3 20010207; EP 0962285 B1 20060705

DOCDB simple family (application)

US 32457399 A 19990602; AT 98124288 T 19981221; DE 19824579 A 19980602; DE 29811901 U 19980703; DE 59813632 T 19981221; EP 98124288 A 19981221