

Title (en)

CLAMPING DEVICE FOR AXIALLY TIGHTENING A TOOL, IN PARTICULAR A DISK

Publication

EP 0344154 B1 19920401 (DE)

Application

EP 87907746 A 19871204

Priority

DE 3702142 A 19870124

Abstract (en)

[origin: WO8805366A1] A clamping device for portable grinding machines is part of the clamping nut (17) that can be screwed on the terminal thread run-out (13) of the driving spindle (10) in order to tighten a grinding wheel (15). The clamping nut (17) carries a non-rotatable and axially movable clamping disk (21). Both comprise annular faces (25, 26) that form together a ball groove along which clamping disk (21) bearing balls (24) can roll. The clamping disk (21) and the clamping nut (17) are coupled by longitudinal pins (36) parallel to the axis that form at the same time ball stops. A ring (29) with a ball groove (32) is axially located between the clamping disk (21) and the clamping nut (17), as well as radial pins (35) that extend into the ball track and are urged by springs (38) against the balls (24). The annular face (25) of the clamping disk (21) comprises recesses (33) into which the balls can penetrate when the actuating element (28) is rotated and the clamping disk (21) is axially released.

IPC 1-7

B24B 45/00

IPC 8 full level

B24B 45/00 (2006.01); **F16D 1/09** (2006.01)

CPC (source: EP US)

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Cited by

US5871322A; US6050741A; US6179512B1

Designated contracting state (EPC)

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WO 8805366 A1 19880728; AT E74303 T1 19920415; DE 3702142 A1 19880804; DE 3702142 C2 19950921; DE 3778034 D1 19920507; EP 0344154 A1 19891206; EP 0344154 B1 19920401; ES 2009520 A6 19891001; JP 2609311 B2 19970514; JP H02501813 A 19900621; US 5042207 A 19910827

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DE 8700571 W 19871204; AT 87907746 T 19871204; DE 3702142 A 19870124; DE 3778034 T 19871204; EP 87907746 A 19871204; ES 8800160 A 19880122; JP 50002388 A 19871204; US 39299489 A 19890724