

Title (en)
LOCKING DEVICE

Title (de)
ZUHALTEVORRICHTUNG

Title (fr)
DISPOSITIF DE MAINTIEN EN POSITION FERMEE

Publication
EP 1523388 B1 20110209 (DE)

Application
EP 03762527 A 20030627

Priority
• DE 10230071 A 20020704
• DE 20308856 U 20030606
• EP 0306801 W 20030627

Abstract (en)
[origin: WO2004004939A1] The invention relates to a locking device for a device used for producing metal pieces that are transformed in a closed form tool. Said locking device at least comprises: - several tensioning loops (2), each of which is provided with at least one traction frame (2.2) that has a closed contour and encompasses two facing, spaced-apart segments (2.3) between which a form tool (12) can be disposed, each of said segments (2.3) having at least one contact surface (2.1) or a contact surface (2.4) and the tensioning loops (2) being pivotably fixed to a joint (8); - a contact surface (3.1) which is located above the form tool (12) or on the surface thereof and is used as a support for a contact surface (2.1) of a tensioning loop (2); and - a device (5) which generates a locking force of more than 3 MN and is provided with several force-generating elements.

IPC 8 full level
B21D 26/02 (2011.01); **B30B 15/04** (2006.01); **B21D 26/039** (2011.01); **B22D 17/26** (2006.01); **B29C 45/66** (2006.01); **B29C 45/67** (2006.01)

CPC (source: EP KR US)
B21D 26/02 (2013.01 - EP KR US); **B21D 26/027** (2013.01 - EP KR US); **B21D 26/039** (2013.01 - EP KR US); **B30B 15/04** (2013.01 - EP US); **B30B 15/042** (2013.01 - EP US)

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)
WO 2004004939 A1 20040115; AU 2003249887 A1 20040123; CA 2490719 A1 20040115; CA 2490719 C 20091222; CN 100448563 C 20090107; CN 1665613 A 20050907; EP 1523388 A1 20050420; EP 1523388 B1 20110209; JP 2005531416 A 20051020; KR 101002021 B1 20101222; KR 20050025308 A 20050314; MX PA05000151 A 20050408; PL 204466 B1 20100129; PL 372981 A1 20050808; RU 2005102708 A 20050720; RU 2324563 C2 20080520; US 2006090529 A1 20060504; US 7415863 B2 20080826

DOCDB simple family (application)
EP 0306801 W 20030627; AU 2003249887 A 20030627; CA 2490719 A 20030627; CN 03815795 A 20030627; EP 03762527 A 20030627; JP 2004518593 A 20030627; KR 20057000101 A 20030627; MX PA05000151 A 20030627; PL 37298103 A 20030627; RU 2005102708 A 20030627; US 52021605 A 20050812