

Title (en)  
MULTIPLE SPINDLE MACHINE TOOL

Publication  
**EP 0000138 B1 19810107 (EN)**

Application  
**EP 78100140 A 19780613**

Priority  
US 80810777 A 19770620

Abstract (en)  
[origin: EP0000138A1] The invention relates to a multiple spindle machine tool having a toolhead transfer mechanism. <??>A rotary toolhead changer arm (58) is provided for transferring toolheads (42) from a toolhead magazine (48) to the toolhead driver (30) of the machine tool and vice versa. <??>The toolhead changer arm (58) is mounted on the machine for rotation about an axis which is inclined at an angle of 45 DEG to the Z axis. The toolhead changer arm (58) has two diametrically opposed ends which are each inclined at an angle of 45 DEG to the rotary axis of the toolhead changer arm (58). Clamps are mounted on both ends of the toolhead changer arm (58) for clamping toolheads (42) thereto. <??>Toolhead shifter means (62) is provided for shifting toolhead (42) between the toolhead magazine (48) and the toolhead changer arm (58) and vice versa.

IPC 1-7  
**B23Q 3/157**

IPC 8 full level  
**B23Q 3/157** (2006.01)

CPC (source: EP US)  
**B23Q 3/157** (2013.01 - EP US); **B23Q 2003/1558** (2013.01 - EP US); **Y10T 483/1738** (2015.01 - EP US); **Y10T 483/1757** (2015.01 - EP US)

Cited by  
EP0111046A3

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

DOCDB simple family (publication)  
**EP 0000138 A1 19790110; EP 0000138 B1 19810107**; AU 3698078 A 19791213; AU 513794 B2 19810108; CA 1091484 A 19801216; DE 2860400 D1 19810226; IT 1159738 B 19870304; IT 7868426 A0 19780619; US 4125932 A 19781121

DOCDB simple family (application)  
**EP 78100140 A 19780613**; AU 3698078 A 19780609; CA 305004 A 19780608; DE 2860400 T 19780613; IT 6842678 A 19780619; US 80810777 A 19770620