

Title (en)
Expandable forming tool

Title (de)
Expandierbares Formwerkzeug

Title (fr)
Outil de formage expansible

Publication
EP 1405682 A2 20040407 (EN)

Application
EP 03021425 A 20030923

Priority
• US 26490902 A 20021004
• US 66002203 A 20030911

Abstract (en)
The tool has cooperating die biasing a wedge shaped actuator (12) outwardly of a body (10). The actuator is driven vertically inwardly of a channel by movement of a larger lower end against an opposing surface provided by the cooperating die. The inward movement of the actuator pushes a slide (14) outwardly in the channel to project beyond a periphery of the body. An independent claim is also included for a punch and die assembly for forming a contour in a workpiece.

IPC 1-7
B21D 13/02; **B21D 28/10**; **B21D 31/04**

IPC 8 full level
B21D 28/10 (2006.01); **B21D 31/04** (2006.01)

CPC (source: EP)
B21D 28/10 (2013.01); **B21D 31/04** (2013.01)

Cited by
CN106493229A; CN102938493A; CN111993001A; CN106424426A; CN107186061A

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)
EP 1405682 A2 20040407; **EP 1405682 A3 20050105**; **EP 1405682 B1 20100623**

DOCDB simple family (application)
EP 03021425 A 20030923