

Title (en)  
ROCK BOLTS WITH AN EXPANDABLE ELEMENT

Title (de)  
GEBIRGSANKER MIT AUFWEITBAREN ELEMENTEN

Title (fr)  
BOULONS D'ANCRAGE A ELEMENTS EXPANSIBLES

Publication  
**EP 1468167 B1 20051019 (DE)**

Application  
**EP 03702186 A 20030121**

Priority  
• AT 0300019 W 20030121  
• AT 972002 A 20020122

Abstract (en)  
[origin: WO03062599A1] The invention relates to a method and a device for drilling, more particularly for percussion drilling or rotary percussion drilling, a hole in ground or rock material and for forming an anchoring, wherein a borehole is formed by introducing a bore-crown (2). According to the invention, the boring rods of the boring device are configured by at least one expandable element (3, 4) having a cavity extending substantially in longitudinal direction of the boring for introducing a pressurized fluid so as to at least partly expand the outer periphery of the expandable element (3, 4) and/or the boring rods are connected to at least one expandable element (3, 4) having a cavity extending substantially in longitudinal direction of the boring for introducing a pressurized fluid so as to expand the outer periphery, whereby a secure anchoring can be achieved with a simplified construction by expanding the expandable element (3, 4) over the entire periphery and length of the device.

IPC 1-7  
**E21D 21/00**; E02D 5/80

IPC 8 full level  
**E21D 20/00** (2006.01); **E21D 21/00** (2006.01)

CPC (source: EP US)  
**E21D 21/004** (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 SE SI SK TR

DOCDB simple family (publication)  
**WO 03062599 A1 20030731**; AT 412739 B 20050627; AT A972002 A 20041115; AU 2003205414 B2 20071213; CA 2473255 A1 20030731; CA 2473255 C 20100420; DE 50301420 D1 20060302; EP 1468167 A1 20041020; EP 1468167 B1 20051019; JP 2005515338 A 20050526; TW 200302897 A 20030816; US 2004231890 A1 20041125; US 7004686 B2 20060228; ZA 200405365 B 20050322

DOCDB simple family (application)  
**AT 0300019 W 20030121**; AT 972002 A 20020122; AU 2003205414 A 20030121; CA 2473255 A 20030121; DE 50301420 T 20030121; EP 03702186 A 20030121; JP 2003562452 A 20030121; TW 92100847 A 20030116; US 88573404 A 20040708; ZA 200405365 A 20040706