

Title (en)
Rock bolt.

Title (de)
Ankerbolzen.

Title (fr)
Fer d'ancrage.

Publication
EP 0351465 A1 19900124 (EN)

Application
EP 88306706 A 19880721

Priority
• ZA 868649 A 19861114
• ZA 878529 A 19871113

Abstract (en)
A method of making a rock bolt with a thread (4) on a section (3) thereof comprising the steps of providing a metal bar (1) of circular or near circular cross-section having a diameter which is substantially equal to the pitch diameter of the thread (4) to be provided thereon, forming a series of protrusions (2) on a first selected section of the bar, straightening the bar, and, forming a thread (4) with the said pitch diameter on a further selected section (3) of the bar (1).

IPC 1-7
B21H 3/02; **B21H 8/00**; **E04C 5/12**; **E21D 21/00**

IPC 8 full level
B21B 1/16 (2006.01); **B21H 3/02** (2006.01); **E04C 5/12** (2006.01); **E21D 21/00** (2006.01)

CPC (source: EP)
B21B 1/163 (2013.01); **B21H 3/02** (2013.01); **E04C 5/125** (2013.01); **E21D 21/008** (2013.01)

Citation (search report)
• [X] US 4649729 A 19870317 - MCDOWELL A DALE [US], et al
• [X] AU 523376 B3 19820624 - TITAN MFG CO PTY LTD
• [A] US 2911865 A 19591110 - BRICKMAN ALAN E
• [A] US 4064729 A 19771227 - HOMERY ALEX
• [A] US 2347904 A 19440502 - GREULICH GERALD G
• [A] US 3742747 A 19730703 - FUKUSHIMA Y, et al
• [A] GB 2045836 A 19801105 - PEABODY COAL CO
• [A] CH 604951 A5 19780915 - BELLOLI FERRIERE & CO
• [X] PATENT ABSTRACTS OF JAPAN, vol. 8, no. 234 (M-334)[1671], 26th October 1984; & JP-A-59 113 948 (NIHON BIYOURATEI SEISAKUSHO K.K.) 30-06-1984

Cited by
WO9310362A1

Designated contracting state (EPC)
BE DE FR GB

DOCDB simple family (publication)
EP 0351465 A1 19900124; **EP 0351465 B1 19940119**; AU 2022788 A 19900201; AU 604948 B2 19910103; ZA 878529 B 19890628

DOCDB simple family (application)
EP 88306706 A 19880721; AU 2022788 A 19880801; ZA 878529 A 19871113