

Title (en)

Down-the-hole-drill.

Title (de)

Bohrvorrichtung im Bohrloch.

Title (fr)

Dispositif de forage de fond de trou.

Publication

EP 0233038 A2 19870819 (EN)

Application

EP 87300928 A 19870203

Priority

ZA 86768 A 19860203

Abstract (en)

A down-the-hole drill is hydraulically powered with air flushing. The rotation motor (16) is on the drill string (10) and rotates a percussion hammer (20) to which the drill bit is chucked. Hydraulic fluid flows in umbilicals (11) clipped into grooves on the sides of the drill rods. The shuttle valve (26) for the hammer is in line with the piston (25).

IPC 1-7

E21B 4/16; **E21B 21/12**; **E21B 21/14**; **E21B 17/18**; **E21B 17/10**; **E21B 4/14**; **E21B 21/08**; **E21B 44/00**

IPC 8 full level

E21B 4/14 (2006.01); **E21B 4/16** (2006.01); **E21B 17/10** (2006.01); **E21B 17/18** (2006.01); **E21B 21/08** (2006.01); **E21B 21/12** (2006.01); **E21B 21/14** (2006.01); **E21B 44/00** (2006.01)

CPC (source: EP)

E21B 4/14 (2013.01); **E21B 4/16** (2013.01); **E21B 17/1035** (2013.01); **E21B 17/18** (2013.01); **E21B 21/12** (2013.01); **E21B 21/14** (2013.01); **E21B 44/005** (2013.01)

Cited by

EP0350581A3; US6308779B1; US5092411A; CN105625937A; FR2663978A1; US5217071A; GB2520301A; CN102216552A; EP2337919A4; US8893827B2; US10544625B2; CN106062299A; EP3242990A4; RU2698341C2; WO2016109868A1; WO2020039393A1; WO8908769A1; WO2010033041A1; US8887835B2; WO9200437A1; WO2015071381A3

Designated contracting state (EPC)

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EP 0233038 A2 19870819; **EP 0233038 A3 19881123**; AU 581800 B2 19890302; AU 6807387 A 19870806; FI 870444 A0 19870202; FI 870444 A 19870804; NO 870405 D0 19870202; NO 870405 L 19870804

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