

Title (en)
Bedrock drilling and excavating apparatus

Title (de)
Grundsteinbohr- und -aushubgerät

Title (fr)
Dispositif de forage et d'excavation de sols rocailleux

Publication
EP 1589187 B1 20070314 (EN)

Application
EP 04101704 A 20040423

Priority
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Abstract (en)
[origin: EP1589187A1] A bedrock drilling and excavating apparatus receives power from a rotational power source to drive a drill to strike and shatter bedrock under the gravity of the apparatus and reciprocal vibrations of a pneumatic unit (50) located on the apparatus. The apparatus includes a coupling device (10) to couple with the rotational power source and an air intake vibration structure (12), a coupling sleeve (20) which has one end coupling with the lower end of a coupling axle and a connector which further couples to the pneumatic unit, and a drill (40) coupling to the pneumatic unit. The pneumatic unit drives the drill to vibrate up and down reciprocally to strike and shatter bedrock. The drill has a drill shell (41) which is alterable according to the diameter of the service shaft without changing the diameter of the pneumatic unit. The drill shell has a plurality of conical drill gimlets (42) mounted thereon in different biased angles to shatter the bedrock and improve drilling and excavating effect. <IMAGE>

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CPC (source: EP)
E21B 7/003 (2013.01); **E21B 7/24** (2013.01); **E21B 10/44** (2013.01)

Cited by
CN109989708A; US2016060501A1; CN113187382A; CN116927668A; US9506344B2; WO2012166905A3; WO2020243767A1; WO2016026990A1

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