Title (en)

HAMMER DRILL

Title (de)

BOHRHAMMER

Title (fr)

MARTEAU PERFORATEUR

Publication

EP 3683021 B1 20230913 (EN)

Application

EP 20151879 A 20200115

Priority

- GB 201900604 A 20190116
- GB 201914118 A 20191001

Abstract (en)

[origin: EP3683021A1] A hammer drill comprising: a housing (340); a tool holder (358) mounted on the front of the housing (340); a motor (344) mounted with the housing (340); a cylinder (302) comprising a passage (396) mounted inside of the housing (340), the cylinder (302) comprising as longitudinal axis (334); a piston (306) slideably mounted within the passage (396) of the cylinder (302); a transmission mechanism (352) which is capable of converting the rotary movement of the motor (344) into a reciprocating movement of the piston (306), the motor (344) reciprocatingly driving the piston (306) via the transmission mechanism (352) in the passage (396) of the cylinder (302) when activated; a ram (304) slideably mounted within the passage (396) of the cylinder (304) which is capable of being reciprocatingly driven by the piston via an air spring (308) when the piston (306) is reciprocatingly driven by the motor, the ram (304) comprising at least one circumferential receiving groove (336); a beat piece support structure (360) mounted within the housing (340) forward of the cylinder (302); a beat piece (310) mounted in the beat piece support structure (360) which is capable of being struck by the reciprocating ram (304), the beat piece (310) capable of transferring the impact onto the end of a cutting tool (356) when held by the tool holder (358); a ram catcher (362) mounted in the housing between the front of the cylinder and the beat piece support structure; characterised in that the ram catcher comprises: a second ring (316) comprising a passage which aligns with the passage (396) of the cylinder (302); a first ring (314) arranged next to the second ring (316) in succession along the longitudinal axis (334) with the second ring (316), the first ring (314) comprising a passage which aligns with the passage of the second ring (316); a radially inward facing groove (324) formed by the two rings (314; 316) at the junction of the first and second rings (314; 316); and a resiliently deformable member (326) mounted in the groove (324) which projects radially inwardly from the radially inward facing groove (324); wherein, when the ram (304) travels to a forward position within the passage (396) of the cylinder (302), the resiliently deformable member (326) engages with the circumferential receiving groove (336) to hold the ram (304) in the forward position.

IPC 8 full level

B25D 11/00 (2006.01)

CPC (source: EP)

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