

Title (en)  
MOTOR-DRIVEN HAND TOOL

Publication  
**EP 0199883 A3 19880420 (DE)**

Application  
**EP 85810591 A 19851212**

Priority  
DE 3511437 A 19850329

Abstract (en)  
[origin: EP0199883A2] 1. A motor-operated hand tool with a housing (1), a motor (5) arranged therein, a driving shaft (14) which is set rotating by the motor (5) and a gearing with torque measuring device arranged between the motor (5) and the driving shaft (14), characterised in that the torque measuring device comprises a gear shaft (11), a toothed wheel (6, 7a) which meshes with the gear shaft (11) and which is connected securely to a crankshaft (7) and a bearing block (9) which is mounted rotatably about the crankshaft which extends parallel to the gear shaft (11) as well as stands coaxially with the axis of rotation of the toothed wheel (6, 7a) and meshes with a motor pinion (5a), the gear shaft (11) and the crankshaft (7) being mounted in the bearing block (9) and the bearing block (9) being supported on the housing (1) by way of electrical force-measuring elements (23) made of piezoceramics.

IPC 1-7  
**B25B 23/147**

IPC 8 full level  
**B23B 45/16** (2006.01); **B25B 23/147** (2006.01); **B25D 11/12** (2006.01); **B25F 5/00** (2006.01)

CPC (source: EP)  
**B25B 23/147** (2013.01); **B25F 5/00** (2013.01)

Citation (search report)

- [Y] DE 2149017 A1 19730405 - HALSTRUP ERWIN
- [Y] DE 2731090 A1 19790118 - NAGEL MASCH WERKZEUG
- [A] US 2054787 A 19360922 - BEAVERS ROY J, et al
- [A] FR 2517134 A1 19830527 - BLACK & DECKER INC [US]
- [A] GB 2108272 A 19830511 - BLACK & DECKER INC
- [A] GB 2074286 A 19811028 - PITCRAFT SUMMIT LTD
- [A] DE 2410114 A1 19750918 - SCHELL FRIEDRICH
- [A] CH 499035 A 19701115 - PIGNONS SA [CH]
- [A] EP 0012438 A1 19800625 - BLACK & DECKER INC [US]
- [A] US 3832897 A 19740903 - SCHENCK C

Cited by  
DE10316844A1; FR2647978A1; US5401124A; EP2669061A1; FR2767737A1; DE102010041313A1; CN102398254A; US10160049B2; US11697200B2; US8727941B2; DE102010041313B4; WO9218291A1; US8316958B2; US9505097B2; US7938194B2; US8555997B2; US10589413B2; US11192232B2

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