

Title (en)  
VIBRATIONS PRODUCING HAND TOOL

Publication  
**EP 0206981 A3 19881109 (DE)**

Application  
**EP 86810196 A 19860430**

Priority  
DE 3521808 A 19850619

Abstract (en)  
[origin: US4711308A] A hand-held tool, such as a hammer drill or chipping hammer, includes a housing with a driving unit for supplying the driving force for the tool with the driving unit generating vibrations. A handle is mounted on the housing and is displaceable in the direction of the main vibration axis. A stop for the forward movement of the handle is provided by an electromagnet. The electromagnet is formed by a yoke, an armature and a magnetic coil and exerts a controlled constant force on the handle and the housing independently of the position of the handle relative to the housing. The electromagnet can be controlled depending on the position of use of the hand-held tool.

IPC 1-7  
**B25F 5/02**; **B25D 17/04**; **B25D 17/24**

IPC 8 full level  
**B25D 17/04** (2006.01); **B25D 17/24** (2006.01); **B25F 5/00** (2006.01); **B25F 5/02** (2006.01)

CPC (source: EP US)  
**B25D 17/043** (2013.01 - EP US); **B25F 5/006** (2013.01 - EP US)

Citation (search report)  
• [A] US 4282938 A 19810811 - MINAMIDATE MAKOTO  
• [A] GB 1199417 A 19700722 - BINDER MAGNETE [DE]  
• [A] BE 498593 A  
• [A] DE 3121882 A1 19820211 - HITACHI KOKI KK [JP]

Cited by  
JP2009513366A; DE10138123A1; DE102005031074A1; GB2451293A; US6148930A; US6076616A; DE19646622B4; DE10158266A1; DE10158266B4; DE10036078A1; DE10036078B4; US7100706B2; WO9821014A1; WO02083369A1; WO9829220A1; US7076838B2; EP2216141A1; EP0916239B1

Designated contracting state (EPC)  
CH DE FR GB LI

DOCDB simple family (publication)  
**EP 0206981 A2 19861230**; **EP 0206981 A3 19881109**; **EP 0206981 B1 19910227**; DE 3521808 A1 19870102; DE 3677644 D1 19910404; US 4711308 A 19871208

DOCDB simple family (application)  
**EP 86810196 A 19860430**; DE 3521808 A 19850619; DE 3677644 T 19860430; US 87397186 A 19860613