

Title (en)  
HAMMERING DEVICE.

Title (de)  
HAMMERGERÄT.

Title (fr)  
DISPOSITIF DE MARTELAGE.

Publication  
**EP 0286680 A4 19890621 (EN)**

Application  
**EP 87901123 A 19870205**

Priority  
JP 15887586 U 19861016

Abstract (en)  
[origin: WO8802666A1] An apparatus has a slide rod (6) provided movably in its axial direction within a hollow frame (4) fixed to the surrounding wall (a) of a hopper or a conduit line etc. to exert impact forces directly or indirectly on said surrounding wall (a), said slide rod (6) comprising a structure including a magnetic material (7) as a part thereof, at the same time electromagnetic coils (11), (12) which move said slide rod (6) in the direction of said surrounding wall (a) on supplying electricity being disposed around said slide rod (6). In the hammering device of this invention, electromagnetic forces are exerted on the magnetic material (7) of the slide rod (6) by controlling electric current to the electromagnetic coils (11), (12), causing said slide rod (6) to be moved to give impact forces on the surrounding wall (a), leading to shorter intervals of impact, increased number of impact per unit time and improved operation efficiency compared to conventional hydraulic or pneumatic devices. And increase or decrease of impact forces and cycles of impact can be optionally changed by adjusting supply conditions of electricity.

IPC 1-7  
**B06B 1/04**

IPC 8 full level  
**B06B 1/04** (2006.01); **B25D 11/06** (2006.01); **G10K 15/04** (2006.01)

CPC (source: EP)  
**B06B 1/04** (2013.01); **B25D 11/064** (2013.01); **G10K 15/043** (2013.01)

Citation (search report)  
• [X] BE 700029 A 19671201  
• [Y] DE 2946264 A1 19810521 - AUDI AG [DE]  
• [Y] US 3302744 A 19670207 - LEMM FREDERICK L  
• See references of WO 8802666A1

Cited by  
FR2732246A1; KR101355766B1; GB2295713A; FR2727758A1; GB2295713B; US10792799B2

Designated contracting state (EPC)  
DE FR GB IT

DOCDB simple family (publication)  
**WO 8802666 A1 19880421**; EP 0286680 A1 19881019; EP 0286680 A4 19890621

DOCDB simple family (application)  
**JP 8700075 W 19870205**; EP 87901123 A 19870205