

Title (en)  
ELECTROMAGNETIC PRINT HAMMER ACTUATOR MECHANISM

Publication  
**EP 0022480 B1 19830601 (DE)**

Application  
**EP 80103384 A 19800618**

Priority  
US 5648679 A 19790711

Abstract (en)  
[origin: ES8102915A1] An electro-magnetic print hammer comprises a single magnetic hammer element in which an impact mass is coupled to a pivotted armature by flexible stem. The hammer-stem has  $(N+1/2)$  periods of oscillation at its resonant frequency during the free flight time of the hammer mass. A permanent magnet with a strong magnetic force which decays rapidly with distance holds the hammer element fixed upon motion of the armature until the armature torque exceeds the magnet holding force to cause the hammer mass to break loose with a snap action. Stop means prevents armature impacts with the operating pole piece of a stator core. The visco-elasticity of the armature stop matches the rebound characteristics of the print medium when impacted by the hammer mass.

IPC 1-7  
**B41J 9/133**; **B41J 9/38**; **B41J 9/127**

IPC 8 full level  
**B41J 2/28** (2006.01); **B41J 9/127** (2006.01); **B41J 9/133** (2006.01); **B41J 9/38** (2006.01); **B41J 9/42** (2006.01); **B41J 9/44** (2006.01)

CPC (source: EP US)  
**B41J 9/127** (2013.01 - EP US); **B41J 9/133** (2013.01 - EP US); **B41J 9/38** (2013.01 - EP US)

Citation (examination)  
• US 3705370 A 19721205 - CHAI HI D, et al  
• US 3711804 A 19730116 - KROFT J, et al  
• US 3747521 A 19730724 - HAMILTON J, et al

Cited by  
DE3307942A1; US4522122A; EP0131300A1

Designated contracting state (EPC)  
AT BE CH DE FR GB LI NL

DOCDB simple family (publication)  
**EP 0022480 A1 19810121**; **EP 0022480 B1 19830601**; AT E3622 T1 19830615; AU 528596 B2 19830505; AU 5901480 A 19810115; BR 8004295 A 19810127; CA 1139004 A 19830104; DE 3063597 D1 19830707; ES 493278 A0 19810216; ES 8102915 A1 19810216; IT 1148842 B 19861203; IT 8022714 A0 19800611; JP H0331586 B2 19910507; JP S5615378 A 19810214; US 4269117 A 19810526

DOCDB simple family (application)  
**EP 80103384 A 19800618**; AT 80103384 T 19800618; AU 5901480 A 19800603; BR 8004295 A 19800710; CA 352816 A 19800527; DE 3063597 T 19800618; ES 493278 A 19800710; IT 2271480 A 19800611; JP 9337280 A 19800710; US 5648679 A 19790711