

Title (en)

Hammer head screw for fastening to the ceiling

Title (de)

Hammerkopfschraube für eine Deckenbefestigung

Title (fr)

Vis comportant une tête en profile d'un marteau pour la fixation au plafond

Publication

**EP 0860617 B2 20061227 (DE)**

Application

**EP 97121929 A 19971212**

Priority

DE 29703027 U 19970220

Abstract (en)

[origin: EP0860617A1] The ceiling is fixed in place using a hammer head screw (10) which has a tension spring (26) that abuts the screw head (16) and a clamp (20) pushed on to the screw shank (22) and which pulls the clamp towards the screw head. The tension spring is an elastic ring or an elastic band with a fastening for mounting on the clamp of the screw head. The screw may alternatively have a compression spring to press the clamp towards the screw head. This can be a spring washer.

IPC 8 full level

**E04B 9/18** (2006.01); **F16B 37/04** (2006.01); **F16B 35/04** (2006.01)

CPC (source: EP)

**E04B 9/18** (2013.01)

Citation (opposition)

Opponent :

- US 3483910 A 19691216 - LALONDE CARL HENRY, et al
- US 4830537 A 19890516 - MUNRO RODERICK L [CA], et al
- DE 4432996 A1 19960321 - HILTI AG [LI]
- DE 29513990 U1 19951026 - WALRAVEN J VAN BV [NL]
- US 4146074 A 19790327 - KOWALSKI JOSEPH W
- DE 9108948 U1 19910919

Cited by

EP1026415A3; DE19913009A1; DE10046198A1

Designated contracting state (EPC)

AT BE CH DE DK ES FR GB GR IT LI NL PT

DOCDB simple family (publication)

**EP 0860617 A1 19980826; EP 0860617 B1 20000503; EP 0860617 B2 20061227**; AT E192551 T1 20000515; CZ 292339 B6 20030917; CZ 51398 A3 19980916; DE 29703027 U1 19980618; DE 59701570 D1 20000608; DK 0860617 T3 20000925; DK 0860617 T4 20070410; ES 2147419 T3 20000901; ES 2147419 T5 20070616; GR 3033225 T3 20000831; HU 218885 B 20001228; HU 9800023 D0 19980330; HU P9800023 A2 19980828; HU P9800023 A3 20000328; PL 190702 B1 20051230; PL 324685 A1 19980831; PT 860617 E 20001031

DOCDB simple family (application)

**EP 97121929 A 19971212**; AT 97121929 T 19971212; CZ 51398 A 19980220; DE 29703027 U 19970220; DE 59701570 T 19971212; DK 97121929 T 19971212; ES 97121929 T 19971212; GR 990403010 T 20000504; HU P9800023 A 19980109; PL 32468598 A 19980206; PT 97121929 T 19971212