

Title (en)  
Multi-part Insulation fastener

Title (de)  
Mehrteiliger Dämmstoffhalter

Title (fr)  
Fixation à pièces multiples pour panneaux d'isolation

Publication  
**EP 1693530 B2 20130724 (DE)**

Application  
**EP 06000657 A 20060113**

Priority  
DE 202005002534 U 20050217

Abstract (en)  
[origin: EP1693530A1] The fixation unit has a tubular shaft (2) at whose end a holding plate (3) is provided, where the plate overlaps an insulating plate externally. A two-part tie rod (4) includes a screw (5), an extension unit (6), and a coupling unit (7) which connects the screw with the extension unit in a torque-proof manner for torque transmission. The screw is made of metal and the extension unit is made of plastic.

IPC 8 full level  
**E04F 13/08** (2006.01); **F16B 13/06** (2006.01); **F16B 13/12** (2006.01); **F16B 35/04** (2006.01)

CPC (source: EP)  
**E04B 1/7633** (2013.01); **E04F 13/0835** (2013.01)

Citation (opposition)  
Opponent :

- EP 0074469 A1 19830323 - BOEHL A SCHRAUBEN KUNST [DE]
- DE 19648823 A1 19980528 - HARDO BEFESTIGUNGEN GMBH [DE]
- EP 0765979 A1 19970402 - EJOT KUNSTSTOFFTECH GMBH [DE]
- DE 19962795 C1 20010503 - EJOT KUNSTSTOFFTECH GMBH [DE]
- DE 29521698 U1 19980514 - THIHA GMBH VERBINDUNGSELEMENTE [DE]
- DE 20103427 U1 20010517 - KEW KUNSTSTOFFERZEUGNISSE GMBH [DE]
- EP 1366303 B1 20051116 - KEW KUNSTSTOFFERZEUGNISSE GMBH [DE]
- DE 3023345 A1 19820114 - UPAT MAX LANGENSIEPEN KG [DE]
- DE 3318800 C2 19880601
- DE 3907034 A1 19900906 - UPAT MAX LANGENSIEPEN KG [DE]
- DE 3913298 A1 19901025 - ITW ATECO GMBH [DE]
- DE 4311144 A1 19941006 - UPAT MAX LANGENSIEPEN KG [DE]
- DE 8534738 U1 19860313
- DE 9411648 U1 19940915 - GEHRING MANFRED DR [DE]
- DE 9001195 U1 19900726
- DE 7932608 U1 19800612 - FAESTER GMBH
- DE 8612794 U1 19860703
- DE 9110068 U1 19911031
- HERING, EKBERT U.A.: "Taschenbuch für Wirtschaftsingen.", 2001, FACHBUCHVERL. LEIPZIG, ISBN: 3-446-21149-7, pages: 124-127 - 134-135
- BEITZ, W. UND GROTE, K.-H. (HRSG): "Dubbel Taschenbuch -Maschinenbau", 1997, SPRINGER-VERLAG, DE, pages: G63 - G66
- MATEK. W. ET AL.: "Roloff/Matek Maschinenelemente", 2000, VERLAG VIEWAG, DE, ISBN: 3-528-84028-0, pages: 385

Cited by  
EP2975191A1; DE102008033768A1; US9551157B2; US9551369B2; US9879416B2; WO2014011065A1; WO2014011064A1; DE102014109959A1; EP2146102A2; EP3757308A1; EP3354812B1

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AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)  
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