

Title (en)  
Flat key

Title (de)  
Flachschlüssel

Title (fr)  
Clé plate

Publication  
**EP 1106754 A3 20030115 (DE)**

Application  
**EP 00403191 A 20001116**

Priority  
DE 19958819 A 19991207

Abstract (en)  
[origin: DE19958819C1] The key (1) has a handle part (2) comprising a casing (4) and a key bit (3) that slides axially into and out of the casing. The handle part casing has a spring (7) with spiral ends (8,9) wound around two holders (10,11). The middle area of the spring has a support part (13) for the inner part of the key bit, so that when the key bit is pushed into the casing, the spring is coiled up and tensioned.

IPC 1-7  
**E05B 19/00**; **A45C 11/32**; **E05B 19/04**

IPC 8 full level  
**A45C 11/32** (2006.01); **E05B 19/00** (2006.01); **E05B 19/04** (2006.01)

CPC (source: EP US)  
**A45C 11/328** (2013.01 - EP US); **E05B 19/046** (2013.01 - EP US); **Y10T 70/7876** (2015.04 - EP US); **Y10T 70/8676** (2015.04 - EP US)

Citation (search report)  
• [A] US 2567816 A 19510911 - LOWELL KNIEBES  
• [A] GB 2084004 A 19820407 - ADAMS DAVID JOHN  
• [A] US 3328986 A 19670704 - THEODORE RALTON  
• [A] FR 2595555 A1 19870918 - COLLIOT GEORGES [FR]

Designated contracting state (EPC)  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)  
**DE 19958819 C1 20010510**; DE 50007279 D1 20040909; EP 1106754 A2 20010613; EP 1106754 A3 20030115; EP 1106754 B1 20040804; US 2001002544 A1 20010607; US 6314775 B2 20011113

DOCDB simple family (application)  
**DE 19958819 A 19991207**; DE 50007279 T 20001116; EP 00403191 A 20001116; US 72970600 A 20001206