

Title (en)

Flooring system comprising a plurality of mechanically joinable floorboards

Title (de)

Fussbodensystem umfassend mehrere mechanisch verbindbaren Fussbodenplatten

Title (fr)

Système de plancher comprenant un pluralité de planches de plancher verrouillables mécaniquement

Publication

EP 1349995 B2 20130821 (EN)

Application

EP 02729616 A 20020114

Priority

- SE 0200043 W 20020114
- SE 0100100 A 20010112
- SE 0100101 A 20010112

Abstract (en)

[origin: WO02055810A1] A floorboard and an openable locking system therefor comprise an undercut groove on one long side of the floorboard and a projecting tongue on the opposite long side of the floorboard. The undercut groove has a corresponding upwardly directed inner locking surface at a distance from its tip. The tongue and the undercut groove are formed to be brought together and pulled apart by a pivoting motion which has its centre (C) close to the intersection between the surface planes (HP) and the common joint plane (VP) of two adjoining floorboards. The undercut in the groove of such a locking system is produced by means of at least two disk-shaped cutting tools whose rotary shafts are inclined relative to each other to form first an inner part of the undercut portion of the groove and then a locking surface positioned closer to the opening of the groove. An installation method for a floor of such boards comprises the steps of laying a new board adjacent to a previously laid board, moving the tongue of the new board into the mouth of the undercut groove of the laid board, angling the new board upward during continued insertion of the tongue into the undercut groove and simultaneously angling down the new board to the final position. A manufacturing method for manufacturing the undercut groove uses machining by means of at least two different rotary cutting tools whose rotary shaft is set at different angles. A wedge-shaped tool for laying of the floorboards is wedge-shaped with an upwardly directed engaging surface at its thicker end.

IPC 8 full level

E04F 15/02 (2006.01); **B27F 1/02** (2006.01); **E04F 15/04** (2006.01); **B27M 3/04** (2006.01); **E04F 15/00** (2006.01)

CPC (source: EP KR)

E04F 15/02 (2013.01 - EP); **E04F 15/04** (2013.01 - KR); **E04F 15/04** (2013.01 - EP); **E04F 2201/0115** (2013.01 - EP); **E04F 2201/0153** (2013.01 - EP); **E04F 2201/023** (2013.01 - EP); **E04F 2201/025** (2013.01 - EP); **E04F 2201/041** (2013.01 - EP); **E04F 2201/042** (2013.01 - EP); **E04F 2201/0517** (2013.01 - EP)

Citation (opposition)

Opponent :

GB 1027709 A 19660427 - JUNCKERS SAVVAERK AS & DE 4130115 A1 19930318 - HEINEMANN HERBERT [DE]

Cited by

US9314888B2; US11717901B2; US10378217B2; US8931174B2; US10500684B2; US9816270B2; US10279404B2; US10697175B2; US11479970B2; US11680413B2

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

Designated extension state (EPC)

SI

DOCDB simple family (publication)

WO 02055810 A1 20020718; AT E370293 T1 20070915; AT E383480 T1 20080115; AU 2002217740 B2 20050825; AU 2002217740 C1 20060216; AU 2002219750 B2 20050825; AU 2002219750 C1 20060216; BR 0206563 A 20040622; BR 0206563 B1 20101116; BR 0206564 A 20040225; CA 2433487 A1 20020718; CA 2433487 C 20100323; CA 2434168 A1 20020718; CA 2434168 C 20091027; CN 1212462 C 20050727; CN 1233914 C 20051228; CN 1484727 A 20040324; CN 1484728 A 20040324; CY 1108037 T1 20130904; CZ 20031846 A3 20040114; CZ 20031850 A3 20040317; CZ 304981 B6 20150304; CZ 305227 B6 20150624; DE 60221788 D1 20070927; DE 60221788 T2 20080605; DE 60224499 D1 20080221; DE 60224499 T2 20090129; DE 60224499 T3 20140206; DK 1349994 T3 20071203; DK 1349995 T3 20080428; DK 1349995 T4 20131125; EP 1349994 A1 20031008; EP 1349994 B1 20070815; EP 1349995 A1 20031008; EP 1349995 B1 20080109; EP 1349995 B2 20130821; EP 1852563 A2 20071107; EP 1852563 A3 20090819; EP 1852563 B1 20130731; EP 1903158 A2 20080326; EP 1903158 A3 20090923; EP 1903158 B1 20121003; EP 2275616 A2 20110119; EP 2275616 A3 20141001; EP 2281974 A2 20110209; EP 2281974 A3 20150311; ES 2291467 T3 20080301; ES 2299570 T3 20080601; ES 2299570 T5 20131223; ES 2396985 T3 20130301; HU 229924 B1 20150128; HU P0303954 A2 20040301; HU P0303954 A3 20040628; HU P0400740 A2 20040728; IL 156528 A0 20040104; IL 156528 A 20080320; IL 156530 A0 20040104; IL 156530 A 20090901; JP 2004518042 A 20040617; JP 2004520502 A 20040708; JP 4092202 B2 20080528; JP 4405149 B2 20100127; KR 100842477 B1 20080701; KR 100898652 B1 20090522; KR 20030094234 A 20031211; KR 20030094235 A 20031211; KR 20090028647 A 20090318; NO 20032687 D0 20030613; NO 20032687 L 20030912; NO 20032688 D0 20030613; NO 20032688 L 20030912; NO 327717 B1 20090914; NO 327720 B1 20090914; NZ 527354 A 20040924; NZ 527355 A 20050930; PL 201620 B1 20090430; PL 202339 B1 20090630; PL 362995 A1 20041115; PL 363051 A1 20041115; PT 1349994 E 20071116; PT 1349995 E 20080403; RU 2003124758 A 20050127; RU 2003124759 A 20050127; RU 2277158 C2 20060527; RU 2277159 C2 20060527; SI 1349994 T1 20080229; SI 1349995 T1 20080630; SI 1349995 T2 20131231; SK 287961 B6 20120703; SK 287962 B6 20120703; SK 9242003 A3 20050804; SK 9252003 A3 20050602; UA 75905 C2 20060615; UA 76974 C2 20061016; WO 02055809 A1 20020718

DOCDB simple family (application)

SE 0200043 W 20020114; AT 02729615 T 20020114; AT 02729616 T 20020114; AU 2002217740 A 20020114; AU 2002219750 A 20020114; BR 0206563 A 20020114; BR 0206564 A 20020114; CA 2433487 A 20020114; CA 2434168 A 20020114; CN 02803650 A 20020114; CY 071101472 T 20071114; CZ 20031846 A 20020114; CZ 20031850 A 20020114; DE 60221788 T 20020114; DE 60224499 T 20020114; DK 02729615 T 20020114; DK 02729616 T 20020114; EP 02729615 A 20020114; EP 02729616 A 20020114; EP 07114318 A 20020114; EP 07150247 A 20020114; EP 10179843 A 20020114; EP 10181566 A 20020114; ES 02729615 T 20020114; ES 02729616 T 20020114; ES 07150247 T 20020114; HU P0303954 A 20020114; HU P0400740 A 20020114; IL 15652802 A 20020114;

IL 15652803 A 20030619; IL 15653002 A 20020114; IL 15653003 A 20030619; JP 2002556447 A 20020114; JP 2002556448 A 20020114;
KR 20037009318 A 20030711; KR 20037009322 A 20030711; KR 20097002496 A 20090206; NO 20032687 A 20030613;
NO 20032688 A 20030613; NZ 52735402 A 20020114; NZ 52735502 A 20020114; PL 36299502 A 20020114; PL 36305102 A 20020114;
PT 02729615 T 20020114; PT 02729616 T 20020114; RU 2003124758 A 20020114; RU 2003124759 A 20020114; SE 0200042 W 20020114;
SI 200230632 T 20020114; SI 200230679 T 20020114; SK 9242003 A 20020114; SK 9252003 A 20020114; UA 2003087602 A 20020114;
UA 2003087603 A 20020114