

Title (en)
HAND-GUIDED SOIL WORKING DEVICE

Title (de)
HANDGEFÜHRTES BODENBEARBEITUNGSGERÄT

Title (fr)
APPAREIL PORTATIF DE TRAITEMENT DES SOLS

Publication
EP 3031378 B1 20170628 (DE)

Application
EP 16153985 A 20140715

Priority
• DE 102013215198 A 20130802
• EP 14177128 A 20140715

Abstract (en)
[origin: US2015113757A1] A hand-guided floor treatment device includes a bottom part, which includes at least one tool which is rotatable on a floor by a drive, as well as a guide part which includes at least one handle and is connected to the bottom part by an articulated arrangement which is developed in such a manner that the guide part, proceeding from a perpendicular, is pivotable in relation to the perpendicular in angular positions rotating in all directions and is operatively connected to the bottom part so as to transmit torque in an angularly limited manner in each angular position in relation to the perpendicular. The at least one rotatable tool is arranged in such a manner on the bottom part that when the floor treatment device is operating the at least one rotatable tool exerts permanent linear propulsion on the bottom part.

IPC 8 full level
A47L 11/30 (2006.01); **A47L 11/26** (2006.01); **A47L 11/40** (2006.01)

CPC (source: EP US)
A47L 7/0023 (2013.01 - US); **A47L 11/00** (2013.01 - EP); **A47L 11/08** (2013.01 - EP); **A47L 11/2025** (2013.01 - EP);
A47L 11/26 (2013.01 - EP US); **A47L 11/305** (2013.01 - EP US); **A47L 11/4016** (2013.01 - EP US); **A47L 11/4063** (2013.01 - EP US);
A47L 11/4066 (2013.01 - US); **A47L 11/4072** (2013.01 - EP US); **A47L 11/4075** (2013.01 - EP US); **A47L 11/4083** (2013.01 - EP US);
A47L 11/4088 (2013.01 - US); **A47L 11/4091** (2013.01 - EP US); **A47L 23/266** (2013.01 - EP)

Citation (opposition)
Opponent : 4Cleanpro S.R.L.
• WO 2011023169 A2 20110303 - KENTER RAINER [DE], et al
• EP 0254833 B1 19910814
• US 3013287 A 19611219 - RAYMOND DESCARRIES
• JP 2008206725 A 20080911 - AMANO CORP
• US 2013133146 A1 20130530 - BRUECKNER JOERG [DE], et al
• US 5765250 A 19980616 - LEE KYU H [US]
• WO 2011071506 A1 20110616 - HRUBY ORBITAL SYSTEMS INC [US], et al
• US 2002023666 A1 20020228 - TAWARA HIROTOSHI [JP], et al
• US 2009019652 A1 20090122 - GOLDBERG JAY MICHAEL [US], et al
• DE 1205664 B 19651125 - ADVANCE MACHINE CO
• EP 2040602 B1 20100324 - VORWERK CO INTERHOLDING [DE]
• US 2005011536 A1 20050120 - HOFTE PAULUS ANTONIUS AUGUSTIN [BE], et al

Opponent : Alfred Kärcher GmbH & Co. KG
• WO 2011023169 A2 20110303 - KENTER RAINER [DE], et al
• WO 2008151689 A1 20081218 - KAERCHER GMBH & CO KG ALFRED [DE], et al
• US 4577364 A 19860325 - DEMETRIADES PETER G [US]
• US 2010251513 A1 20101007 - PRYOR MARK [US], et al
• DE 2443969 A1 19760401 - SCHROEDER HERBERT
• US 3013287 A 19611219 - RAYMOND DESCARRIES
• DE 8630341 U1 19870108
• GB 2489056 A 20120919 - STUDEBAKER ROY [US], et al
• ALFRED KÄRCHER: "Damit ein schmutziger Boden niemand in die Knie zwingt (BR 30/4C)", KARCHER, January 2009 (2009-01-01), XP055394095
• "Kärcher Scheuersaugmaschine BR 30/4 C", YOUTUBE-VIDEO, 1 September 2010 (2010-09-01), XP054977601, Retrieved from the Internet
<URL:www.youtube.com/watch?v=sJ4ZzKtue2o>

Opponent : Numatic
• JP 2008206725 A 20080911 - AMANO CORP
• EP 0640314 A1 19950301 - UNILEVER PLC [GB], et al
• DE 4200064 A1 19930708 - HAKO GMBH & CO [DE]
• US 4741069 A 19880503 - HELM KURT [DE], et al
• DE 3830847 A1 19900322 - KRAHNEN GMBH [DE]
• US 5849097 A 19981215 - WINDMEISSER DIETER [CH]
• DE 10314379 A1 20041021 - FRAUNHOFER GES FORSCHUNG [DE]

Opponent : Numatic international
• EP 0978249 A2 20000209 - KENTER RAINER [DE]
• US 2012279010 A1 20121108 - KENTER RAINER [DE], et al
• US 2010251513 A1 20101007 - PRYOR MARK [US], et al
• WO 2008151689 A1 20081218 - KAERCHER GMBH & CO KG ALFRED [DE], et al
• US 4577364 A 19860325 - DEMETRIADES PETER G [US]
• NUMATIC INTERNATIONAL: "Nuspeed", BROCHURE, 8 January 2013 (2013-01-08), XP055477250
• NUMATIC INTERNATIONAL: "Twintec 345B. The 24 carat advance in 24V technology", NUMATIC INTERNATIONAL, 1995, XP055477262

Opponent : Numatic international Ltd
US 2558590 A 19510626 - SMITH PHILIP P

Cited by

WO2023139280A1; GB2609221A; WO2023002189A1; EP3753466A1; IT201900007003A1; DE102021119016A1; WO2023002009A1; DE102022101563A1; DE102020004413A1; WO2022018216A1; EP4445818A2

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

EP 2832277 A2 20150204; EP 2832277 A3 20151021; EP 2832277 B1 20160914; DE 102013215198 A1 20150205;
DE 202013012528 U1 20170420; DE 202013012528 U9 20170810; DK 2832277 T3 20170102; DK 3031378 T3 20170925;
EP 3031378 A1 20160615; EP 3031378 B1 20170628; ES 2605395 T3 20170314; ES 2640742 T3 20171106; HU E030965 T2 20170628;
HU E034303 T2 20180228; PL 2832277 T3 20170228; PL 3031378 T3 20171229; US 2015113757 A1 20150430; US 9826874 B2 20171128

DOCDB simple family (application)

EP 14177128 A 20140715; DE 102013215198 A 20130802; DE 202013012528 U 20130802; DK 14177128 T 20140715;
DK 16153985 T 20140715; EP 16153985 A 20140715; ES 14177128 T 20140715; ES 16153985 T 20140715; HU E14177128 A 20140715;
HU E16153985 A 20140715; PL 14177128 T 20140715; PL 16153985 T 20140715; US 201414448570 A 20140731