

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);  
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**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.  
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• EP 0254833 B1 19910814  
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Opponent : Alfred Kärcher GmbH & Co. KG  
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Opponent : Numatic  
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• DE 4200064 A1 19930708 - HAKO GMBH & CO [DE]  
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Opponent : Numatic international  
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Designated contracting state (EPC)

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DOCDB simple family (publication)

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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)

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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