

Title (en)

CLEANING DEVICE FOR CLEANING A SURFACE COMPRISING A BRUSH AND A SQUEEGEE ELEMENT

Title (de)

REINIGUNGSVORRICHTUNG ZUR REINIGUNG EINER OBERFLÄCHE MIT EINER BÜRSTE UND RAKELEMENT

Title (fr)

DISPOSITIF DE NETTOYAGE DESTINÉ À NETTOYER UNE SURFACE

Publication

EP 2747626 B1 20170503 (EN)

Application

EP 12778420 A 20120817

Priority

- US 201161526316 P 20110823
- IB 2012054200 W 20120817

Abstract (en)

[origin: WO2013027164A1] The present invention relates to a cleaning device for cleaning a surface (20), comprising: -a nozzle arrangement (10) that comprises i) a brush (12) rotatable about a brush axis (14), said brush (12) being provided with flexible brush elements (16) having tip portions (18) for contacting the surface to be cleaned (20) and picking up dirt particles (22) and liquid (24) from the surface (20) during a pick-up period when the brush elements (16) contact the surface (20) during the rotation of the brush (12), wherein a linear mass density of a plurality of the brush elements (16) is, at least at the tip portions (18), lower than 150 g per 10 km, and ii) a single squeegee element (32) for pushing or wiping dirt particles (22) and liquid (24) across or off the surface to be cleaned (20) during movement of the cleaning device (100), said squeegee element (32) being spaced apart from the brush (12) and extending substantially along a longitudinal direction (48) being substantially parallel to the brush axis (14), wherein a suction area (34) is defined within the nozzle arrangement (10) between the squeegee element (32) and the brush (12), -a drive means for driving the brush (12) in rotation, wherein the drive means are adapted to realize a centrifugal acceleration at the tip portions (18) which is, in particular during a dirt release period when the brush elements (16) are free from contact to the surface (20) during rotation of the brush (12), at least 3,000 m/s², and -a vacuum aggregate (38) for generating an under-pressure in the suction area (34) for ingesting dirt particles (22) and liquid (24).

IPC 8 full level

A47L 11/40 (2006.01); **A47L 9/04** (2006.01)

CPC (source: EP RU US)

A47L 9/0477 (2013.01 - EP US); **A47L 9/0488** (2013.01 - EP US); **A47L 11/4041** (2013.01 - EP RU US); **A47L 11/4044** (2013.01 - EP US); **A47L 11/4044** (2013.01 - RU)

Cited by

EP3270756A4; WO2018024669A1; US10813514B2

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)

WO 2013027164 A1 20130228; CN 102949151 A 20130306; CN 102949151 B 20170908; CN 103764004 A 20140430; CN 203016862 U 20130626; EP 2747626 A1 20140702; EP 2747626 B1 20170503; JP 2014526934 A 20141009; JP 5960823 B2 20160802; RU 2014111047 A 20150927; RU 2603600 C2 20161127; US 2014182079 A1 20140703

DOCDB simple family (application)

IB 2012054200 W 20120817; CN 201210310251 A 20120822; CN 201220431315 U 20120822; CN 201280041048 A 20120817; EP 12778420 A 20120817; JP 2014526582 A 20120817; RU 2014111047 A 20120817; US 201214237675 A 20120817