

Title (en)

Ecologically efficient device for vacuum cleaning

Title (de)

Ökologisch effiziente Vorrichtung zum Staubsaugen

Title (fr)

Dispositif efficace au plan écologique destiné à l'aspiration

Publication

**EP 2502536 B1 20190102 (DE)**

Application

**EP 11007088 A 20110831**

Priority

- EP 11002361 A 20110322
- EP 11007088 A 20110831

Abstract (en)

[origin: EP2502536A1] The device has a vacuum cleaning unit and a filter bag (66) exhibiting fixed dovetail folds, where the device exhibits quality factor during unfilling of the bag. The quality factor is defined by low pressure according to EN 60312, low pressure in a filter bag receiving space (68) in kilopascal during unfilling of the bag and separation degree of filter bag material larger than 30 percentage. The device exhibits the quality factor during partial filling of the bag, where the latter quality factor is defined by the low pressure and the separation degree larger than 17 percentage.

IPC 8 full level

**A47L 9/00** (2006.01); **A47L 9/14** (2006.01); **A47L 9/28** (2006.01)

CPC (source: EP US)

**A47L 9/14** (2013.01 - EP US); **A47L 9/1427** (2013.01 - US)

Citation (examination)

- DE 102005054903 B3 20070322 - FIBERMARK GESSNER GMBH & CO [DE]
- EP 0338479 A1 19891025 - GESSNER & CO GMBH [DE]
- DE 2734051 A1 19790215 - LICENTIA GMBH
- EP 0651965 A1 19950510 - SEB SA [FR]

Citation (opposition)

Opponent : . Dr. Tarek Khartabil,

- WO 0000269 A1 20000106 - KOEHLER OTMAR [DE]
- DE 1908304 U 19650114 - SIEMENS ELEKTROGERAETE GMBH [DE]
- DE 20122492 U1 20051208 - BSH BOSCH SIEMENS HAUSGERAETE [DE]
- EP 2502537 A1 20120926 - SCHULTINK JAN [BE]
- DE 102010046463 A1 20120308 - EUROFILTERS HOLDING NV [BE]
- "Staub für den Hausgebrauch - Trockensauger - Prüfverfahren zur Bestimmung der Gebrauchseigenschaften (IEC 59F/188/CDV:2009); Deutsche Fassung FprEN 60312-1:2009", DEUTSCHE NORM, December 2009 (2009-12-01), pages 1 - 68, XP055678217
- BEDIENUNGSANLEITUNG VORWERK KOBOLD 140
- AUTOMATED FILTER TESTER, 2010, XP55678226
- Retrieved from the Internet <URL:https://www.amazon.de/Siemens-VS26XTRM11-Bodenstaubsauger- extreme-Luftd urchsatz/dp/B005J49U PI>
- MESSPROTOKOLL, 13 September 2019 (2019-09-13)

Opponent : Wolf PVG GmbH & Co. KG

- DE 202010013156 U1 20110224 - WOLF PVG GMBH & CO KG [DE]
- DE 202006019108 U1 20070222 - BRANOFILTER GMBH [DE]
- EP 2263507 A1 20101222 - EUROFILTERS NV [BE]
- EP 1795247 B1 20091202 - EUROFILTERS NV [BE]
- EP 2011555 A1 20090107 - EUROFILTERS HOLDING NV [BE]
- US 5647881 A 19970715 - ZHANG ZHIQUN [US], et al
- DE 202008016300 U1 20090226 - WOLF PVG GMBH & CO KG [DE]
- DE 202008016669 U1 20090305 - WOLF PVG GMBH & CO KG [DE]

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 2502536 A1 20120926; EP 2502536 B1 20190102;** AU 2012230640 A1 20131003; AU 2012230640 B2 20170202; AU 2012230641 A1 20131003; AU 2012230641 B2 20161201; AU 2012230641 C1 20170330; BR 112013024113 A2 20161213; BR 112013024203 A2 20161213; CN 103547201 A 20140129; CN 103547201 B 20160622; CN 103648347 A 20140319; CN 103648347 B 20160608; DK 2502536 T3 20190401; DK 2502537 T3 20190408; EP 2502537 A1 20120926; EP 2502537 B1 20190102; ES 2713045 T3 20190517; ES 2713074 T3 20190517; JP 2014509903 A 20140424; JP 2014512901 A 20140529; NZ 615443 A 20151030; NZ 615445 A 20151030; PL 2502536 T3 20190628; PL 2502537 T3 20190628; RU 2013141963 A 20150427; RU 2013141967 A 20150427; US 2014068889 A1 20140313; US 2014075713 A1 20140320; US 9713409 B2 20170725; US 9877627 B2 20180130; WO 2012126616 A1 20120927; WO 2012126616 A8 20140103; WO 2012126617 A1 20120927

DOCDB simple family (application)

**EP 11007088 A 20110831;** AU 2012230640 A 20120321; AU 2012230641 A 20120321; BR 112013024113 A 20120321; BR 112013024203 A 20120321; CN 201280024960 A 20120321; CN 201280025050 A 20120321; DK 11007088 T 20110831; DK 11007089 T 20110831; EP 11007089 A 20110831; EP 2012001240 W 20120321; EP 2012001241 W 20120321; ES 11007088 T 20110831; ES 11007089 T 20110831; JP 2014500280 A 20120321; JP 2014500281 A 20120321; NZ 61544312 A 20120321; NZ 61544512 A 20120321; PL 11007088 T 20110831; PL 11007089 T 20110831; RU 2013141963 A 20120321; RU 2013141967 A 20120321; US 201214006593 A 20120321; US 201214006611 A 20120321