

Title (en)
Vacuum cleaner with operating and display elements

Title (de)
Staubsauger mit Bedien- und Anzeigeelementen

Title (fr)
Aspirateur doté d'éléments de commande et d'affichage

Publication
EP 2700345 A3 20170614 (DE)

Application
EP 13401082 A 20130802

Priority
DE 102012107689 A 20120822

Abstract (en)
[origin: EP2700345A2] The vacuum cleaner (1) has control- and display elements for controlling the cleaner and displaying information. A projection unit (2) projects the control- and display elements on a projection surface (4). A light source (5) i.e. infra-red light source, radiates light beams in a non-viewable region i.e. infrared region, and a camera receives the reflected beams of the light source to detect an operation of the control elements on the projection surface. The projection unit comprises a laser and/or multiple LEDs. The projection surface is located on a floor area.

IPC 8 full level
A47L 9/28 (2006.01); **A47L 9/30** (2006.01); **A47L 9/32** (2006.01)

CPC (source: EP)
A47L 9/2805 (2013.01); **A47L 9/2857** (2013.01); **A47L 9/30** (2013.01); **A47L 9/327** (2013.01)

Citation (search report)
• [A] EP 2422676 A1 20120229 - MIELE & CIE [DE]
• [AD] DE 19525894 A1 19970116 - VORWERK CO INTERHOLDING [DE]
• [AD] DE 102011050357 A1 20120216 - VORWERK CO INTERHOLDING [DE]
• [AD] DE 19918072 A1 20000629 - SIEMENS AG [DE]

Cited by
GB2600646A; GB2600646B; DE102016100949A1; DE102016100949B4; JP2018079134A; GB2589315A; GB2589315B; CN114727739A; US10111567B2; US11944260B2; JPWO2016042973A1; WO2016042973A1; WO2021099757A1; EP3269284B1; EP3269284B2

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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

Designated extension state (EPC)
BA ME

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DE 102012107689 B3 20130926; EP 2700345 A2 20140226; EP 2700345 A3 20170614; EP 2700345 B1 20180307

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