

Title (en)
SURFACE TREATMENT APPARATUS AND METHOD

Title (de)
OBERFLÄCHENBEHANDLUNGSVORRICHTUNG UND -VERFAHREN

Title (fr)
APPAREIL ET PROCÉDÉ DE TRAITEMENT DE SURFACE

Publication
EP 3845107 B1 20240807 (EN)

Application
EP 20206348 A 20160526

Priority

- US 201562166636 P 20150526
- US 201562245195 P 20151022
- EP 16800763 A 20160526
- US 2016034498 W 20160526

Abstract (en)
[origin: WO2016191627A1] Methods and apparatuses for surface treatment may comprise a body, a connector assembly and a mop head configured to be used in non-steam and/or steam operations. The connector assembly may be configured to comprise of a universal joint to receive different bodies or different mop heads. The mop head may be configured to rotate relative to the connector assembly about a transverse axis. One or both surfaces of the mop head may be used for cleaning and a change over valve mechanism may direct steam flow from one surface of the mop head to the other. The apparatus may be configured to be used for both normal area cleaning in a normal area cleaning mode and to clean hard and messy stains in a steam blast mode with or without scrubbing action. In an embodiment, the apparatus may be configured to comprise a mop head comprising releasable flaps.

IPC 8 full level
A47L 13/22 (2006.01); **A47L 13/20** (2006.01)

CPC (source: CN EP KR)
A47L 13/22 (2013.01 - CN); **A47L 13/225** (2013.01 - CN KR); **A47L 13/254** (2013.01 - CN EP KR); **A47L 13/256** (2013.01 - EP);
A47L 13/258 (2013.01 - CN EP KR)

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 2016191627 A1 20161201; AU 2016268418 A1 20180125; AU 2016268418 B2 20210415; AU 2021201648 A1 20210408;
AU 2021201648 B2 20230525; AU 2021201648 B9 20230615; AU 2023201663 A1 20230413; AU 2023201663 B2 20241121;
AU 2024227522 A1 20241114; CA 2987313 A1 20161201; CA 2987313 C 20240102; CA 3208217 A1 20161201; CN 107708516 A 20180216;
CN 107708516 B 20210323; CN 112998611 A 20210622; CN 112998611 B 20230411; EP 3302207 A1 20180411; EP 3302207 A4 20190417;
EP 3302207 B1 20210224; EP 3845107 A1 20210707; EP 3845107 B1 20240807; EP 4442181 A2 20241009; JP 2018521724 A 20180809;
JP 2021049402 A 20210401; JP 2021049403 A 20210401; JP 6838001 B2 20210317; JP 7200206 B2 20230106; JP 7201655 B2 20230110;
KR 102546433 B1 20230621; KR 102712283 B1 20240930; KR 20180020175 A 20180227; KR 20230093071 A 20230626;
KR 20240145083 A 20241004

DOCDB simple family (application)
US 2016034498 W 20160526; AU 2016268418 A 20160526; AU 2021201648 A 20210316; AU 2023201663 A 20230317;
AU 2024227522 A 20241022; CA 2987313 A 20160526; CA 3208217 A 20160526; CN 201680030827 A 20160526;
CN 202110220270 A 20160526; EP 16800763 A 20160526; EP 20206348 A 20160526; EP 24192985 A 20160526; JP 2017561704 A 20160526;
JP 2020211395 A 20201221; JP 2020211396 A 20201221; KR 20177037303 A 20160526; KR 20237019994 A 20160526;
KR 20247032084 A 20160526