

Title (en)

STAIN REMOVING DEVICE AND STAIN REMOVING UNIT

Title (de)

FLECKENENTFERNUNGSVORRICHTUNG UND FLECKENENTFERNUNGSEINHEIT

Title (fr)

DISPOSITIF D'ÉLIMINATION DE TACHES ET UNITÉ D'ÉLIMINATION DE TACHES

Publication

**EP 3159447 A1 20170426 (EN)**

Application

**EP 15809561 A 20150423**

Priority

- JP 2014124148 A 20140617
- CN 2015077300 W 20150423

Abstract (en)

Provided is a stain removing device which can perform a stain removing operation at constant beating force and constant beating speed without causing fatigue of a hand, and can stably provide liquid required for stain removal. The stain removing device (100) includes: a head part (1) having a beating surface (111), a vibration unit (2) enabling the head part (1) to vibrate in a direction substantially orthogonal to the beating surface (111) by power supply, a liquid containing part (3) containing liquid, and a water supply path (4) having one end (41a) connected with the liquid containing part (3) and the other end (1121h) opened in the periphery of the head part (1). Along with vibration of the head part (1) caused by the vibration unit (2), the liquid is supplied to the periphery of the head part (1) from the other end (1121h) of the water supply path (4).

IPC 8 full level

**D06F 7/04** (2006.01)

CPC (source: EP KR US)

**D06F 5/02** (2013.01 - KR); **D06F 7/04** (2013.01 - EP KR US); **D06F 43/002** (2013.01 - US); **D06F 35/00** (2013.01 - EP KR US)

Cited by

EP3498907A1; US11458492B2; WO2019030028A1

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

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**EP 3159447 A1 20170426; EP 3159447 A4 20180117**; KR 101892403 B1 20180827; KR 20170018061 A 20170215;  
US 2017096758 A1 20170406; US 2017268154 A1 20170921; WO 2015192689 A1 20151223

DOCDB simple family (application)

**EP 15809561 A 20150423**; CN 2015077300 W 20150423; KR 20177001333 A 20150423; US 201415509475 A 20141230;  
US 201515316897 A 20150423