

Title (en)

Liquid droplet ejection apparatus and method for recovering nozzle of liquid droplet ejection apparatus

Title (de)

Flüssigkeitstropfenspendvorrichtung und Verfahren zur Wiederherstellung einer Düse einer Flüssigkeitstropfenausgabevorrichtung

Title (fr)

Appareil d'éjection de gouttelettes liquides et procédé de récupération de buse d'un appareil d'éjection de gouttelettes liquides

Publication

EP 2837497 A3 20150520 (EN)

Application

EP 14172583 A 20140616

Priority

JP 2013131601 A 20130624

Abstract (en)

[origin: EP2837497A2] Sedimentation of solid particles in an ink is effectively eliminated, and liquid droplets can be stably ejected for a long time. There is provided a liquid droplet ejection apparatus including: a head 1 that includes an ink chamber, a nozzle 12 provided in accordance with the ink chamber, and an energy giving device that gives energy to the ink in the ink chamber, the head performing printing on a print region of a recording medium C by ejecting liquid droplets from the nozzle 12; and a drive pulse generating device for generating, as the drive pulse, an ejection pulse that is used for ejecting the liquid droplets from the nozzle 12 and a micro-vibration pulse that micro-vibrates the ink in the ink chamber so as not to eject the liquid droplets from the nozzle 12, wherein the ink contains a dispersion medium and solid particles having higher specific gravity than that of a dispersion medium, and the liquid droplet ejection apparatus includes a refresh device for performing a micro-vibration operation for applying the plurality of micro-vibration pulses when the head is present in a non-print region, and an ejection operation for applying the plurality of rejection pulses after the micro-vibration operation and ejecting a liquid droplet amount equal to or greater than a capacity of the ink chamber from the nozzle 12.

IPC 8 full level

B41J 2/165 (2006.01); **B41J 2/045** (2006.01)

CPC (source: EP)

B41J 2/0458 (2013.01); **B41J 2/04581** (2013.01); **B41J 2/04588** (2013.01); **B41J 2/04596** (2013.01); **B41J 2/16526** (2013.01);
B41J 2/16585 (2013.01)

Citation (search report)

- [XI] US 2009160887 A1 20090625 - HAMAZAKI TOSHINOBU [JP], et al
- [X] US 2002171704 A1 20021121 - YONEKUBO SHUJI [JP], et al
- [X] EP 2127882 A1 20091202 - SEIKO EPSON CORP [JP]
- [A] US 2009289975 A1 20091126 - YOSHIDA TAKAHIRO [JP]

Cited by

DE102016100036A1; US11020982B2; US9796175B2; WO2018001441A1

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 2837497 A2 20150218; EP 2837497 A3 20150520; EP 2837497 B1 20191002; CN 104228349 A 20141224; CN 104228349 B 20160706;
JP 2015003495 A 20150108

DOCDB simple family (application)

EP 14172583 A 20140616; CN 201410285814 A 20140624; JP 2013131601 A 20130624