

Title (en)

Roller member for electrophotography, process cartridge and electrophotographic apparatus

Title (de)

Rollenelement für die Elektrofotografie, Prozesskassette und elektrofotografische Vorrichtung

Title (fr)

Élément de rouleau pour électrophotographie, cartouche de traitement et appareil électrophotographique

Publication

**EP 2787394 A2 20141008 (EN)**

Application

**EP 14001240 A 20140403**

Priority

JP 2013077702 A 20130403

Abstract (en)

The roller member has a substrate and an electroconductive elastic layer. The elastic layer has a crown shape of which an outer diameter at the middle in the lengthwise direction is larger than those at its both ends. The elastic layer includes a bowl-shaped resin particle. The surface of the roller member has concavity derived from an opening of the bowl-shaped resin particle and a protrusion derived from an edge of the opening of the resin particle. The relation in the restoring rate for elastic deformation between at the middle of the roller member and at its both ends is such that: on the surface of the elastic layer the restoring rate is larger at both ends than that at the middle, and at the position of depth  $t \mu\text{m}$  from the elastic layer surface the restoring rate is larger at the middle than that at both ends.

IPC 8 full level

**G03G 15/08** (2006.01)

CPC (source: EP)

**G03G 15/0233** (2013.01); **G03G 15/0818** (2013.01); **G03G 15/162** (2013.01); **G03G 15/1685** (2013.01); **G03G 15/2057** (2013.01);  
**G03G 15/206** (2013.01)

Citation (applicant)

- JP 2008276026 A 20081113 - CANON KK
- JP 2011237470 A 20111124 - CANON KK
- "Tufdene", 2003, ASAHI KASEI CORP

Cited by

EP4099095A1; CN114270274A; US10248042B2; US10831126B2; US11644761B2; US11835878B2

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 2787394 A2 20141008**; **EP 2787394 A3 20171004**; **EP 2787394 B1 20181003**; CN 104102107 A 20141015; CN 104102107 B 20160302;  
JP 2014211624 A 20141113; JP 6016838 B2 20161026

DOCDB simple family (application)

**EP 14001240 A 20140403**; CN 201410133291 A 20140403; JP 2014065385 A 20140327