

Title (en)
HEATING DEVICE, FIXING DEVICE, AND IMAGE FORMING APPARATUS

Title (de)
HEIZVORRICHTUNG, FIXIERVORRICHTUNG UND BILDERZEUGUNGSVORRICHTUNG

Title (fr)
DISPOSITIF DE CHAUFFAGE, DISPOSITIF DE FIXATION ET APPAREIL DE FORMATION D'IMAGES

Publication
EP 3570114 A1 20191120 (EN)

Application
EP 18215082 A 20181221

Priority
• JP 2017249230 A 20171226
• JP 2018237465 A 20181219

Abstract (en)
A heating device (3000) includes a base (350), resistance heating elements (361 to 368), a power controller (450), a first temperature detector (TH1), a second temperature detector (TH2), a power interrupter (CO), and a controller (400). The resistance heating elements (361 to 368) are arranged in a longitudinal direction of the base (350) and electrically connected in parallel. The first detector (TH1) detects a temperature of a first resistance heating element (364). The second detector (TH2) detects a temperature of a second resistance heating element (368). The interrupter interrupts power to the elements when the temperature of the second element becomes a predetermined temperature or more. The controller controls the power controller such that a temperature of each element becomes a predetermined temperature, based on a result of detection of the first detector, and interrupts the power when the second detector detects predetermined temperature information regarding the second element.

IPC 8 full level
G03G 15/20 (2006.01)

CPC (source: EP US)
G03G 15/20 (2013.01 - US); **G03G 15/2042** (2013.01 - EP); **G03G 15/2053** (2013.01 - EP); **G03G 21/00** (2013.01 - EP); **H05B 1/0241** (2013.01 - EP); **G03G 2215/2019** (2013.01 - EP); **G03G 2215/2035** (2013.01 - EP)

Citation (applicant)
• JP 2015194713 A 20151105 - CANON KK
• JP 2016018127 A 20160201 - CANON KK

Citation (search report)
• [E] EP 3495893 A1 20190612 - RICOH CO LTD [JP]
• [XY] WO 2017043020 A1 20170316 - CANON KK [JP]
• [Y] EP 2711778 A2 20140326 - CANON KK [JP]
• [Y] JP 2001242740 A 20010907 - CANON KK
• [Y] US 2009245900 A1 20091001 - KAGAWA TOSHIAKI [JP]
• [Y] US 2010303525 A1 20101202 - MITSUOKA TETSUNORI [JP], et al

Cited by
EP4009111A1; US11662678B2

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 3570114 A1 20191120; EP 4339709 A2 20240320; EP 4339709 A3 20240529; JP 2019117377 A 20190718; JP 2023085496 A 20230620; JP 7302167 B2 20230704

DOCDB simple family (application)
EP 18215082 A 20181221; EP 23218622 A 20181221; JP 2018237465 A 20181219; JP 2023062304 A 20230406