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Takahashi

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(54) **FIXING DEVICE AND IMAGE FORMING APPARATUS**

(56) **References Cited**

U.S. PATENT DOCUMENTS

(71) Applicant: **KYOCERA Document Solutions Inc.,**
Osaka (JP)

8,983,353 B2 3/2015 Yoshiura et al.
2014/0016971 A1* 1/2014 Arai G03G 15/2053
399/329

(72) Inventor: **Hironori Takahashi,** Osaka (JP)

FOREIGN PATENT DOCUMENTS

(73) Assignee: **KYOCERA Document Solutions Inc.,**
Osaka (JP)

JP 2012-128075 A 7/2012

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* cited by examiner

Primary Examiner — Roy Y Yi

(74) *Attorney, Agent, or Firm* — Studebaker & Brackett PC

(57) **ABSTRACT**

(21) Appl. No.: **14/857,960**

A fixing device includes a fixing belt, a pressuring member, a heat source, a reflecting member, a supporting member and a retaining member. The pressuring member is configured to come into pressure contact with the fixing belt to form a fixing nip. The heat source is arranged at an inside in a radial direction of the fixing belt and configured to radiate a radiant heat. The reflecting member is configured to reflect the radiant heat radiated from the heat source to an inner circumference face of the fixing belt. The supporting member is configured to support the reflecting member from a side of the fixing nip. The retaining member includes a contact part and a holding part. The contact part is configured to come into contact with the reflecting member from a side opposite to the fixing nip. The holding part is configured to hold the heat source.

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See application file for complete search history.

10 Claims, 11 Drawing Sheets

