

Title (en)

Fusing roller assembly including a resistance coil for heating wound around a heat pipe roller for electrophotographic image forming apparatus

Title (de)

Fixierrolleranordnung eines electrophotographischen Bilderzeugungsgeräts mit Heizspule um eine Wärmeübertragungswalze

Title (fr)

Ensemble de fixation avec la bobine de chauffage autour d'un tube de chauffe d'un appareil électrophotographique de formation d'images

Publication

EP 1217466 A1 20020626 (EN)

Application

EP 01310591 A 20011219

Priority

- KR 20010013451 A 20010315
- KR 20010024378 A 20010504
- US 25711800 P 20001222
- US 94765701 A 20010907

Abstract (en)

A structurally improved fusing roller assembly (200) based on the heat pipe principle is provided. The fusing roller assembly includes a fusing roller (212) and a heat pipe (262) coaxially mounted inside the fusing roller (212). A resistance heater (213) is helically wound around the exterior cylindrical surface of the heat pipe, and rests between the inner cylindrical surface of the fusing roller and the exterior cylindrical surface of the heat pipe. The heat pipe (262) is hermetically sealed. The sealed inner space (268) is partially filled with a working fluid (214). The surface of fusing roller (212) can be instantaneously heated up to a target fusing temperature. The fusing roller assembly (200) can be heated up to a target fusing temperature within a shorter period of time without need for warm-up and stand-by period, so that power consumption decreases. <IMAGE>

IPC 1-7

G03G 15/20

IPC 8 full level

G03G 15/20 (2006.01); **H05B 3/00** (2006.01)

CPC (source: EP)

G03G 15/2053 (2013.01); **H05B 3/0095** (2013.01)

Citation (search report)

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- [A] US 6072979 A 20000606 - HIROAKA YUJI [TW]
- [A] WO 9831194 A1 19980716 - AMERICAN ROLLER CO [US]
- [Y] PATENT ABSTRACTS OF JAPAN vol. 1997, no. 11 28 November 1997 (1997-11-28)

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