

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 22

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte TETSURO ITO

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Appeal No. 2000-1347  
Application No. 08/740,283

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ON BRIEF

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Before FRANKFORT, STAAB, and McQUADE, Administrative Patent Judges.

McQUADE, Administrative Patent Judge.

DECISION ON APPEAL

Tetsuro Ito appeals from the final rejection of claims 1 through 16. Claims 23 through 29, the only other claims pending in the application, stand allowed.

THE INVENTION

The invention relates to "a fixing device for heating and thereby fixing an unfixed image such as a toner image to a record member bearing the unfixed image in an image forming

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apparatus such as a copying machine, a printer or the like" (specification, page 1). The fixing device, which is heated by an electrical resistance member, is particularly designed to reduce the possibility of electrical shock to an operator and current leak damage to other electrical components (see, for example, pages 8 and 9 in the appellant's specification). Claim 1 is illustrative of the subject matter on appeal and reads as follows:

1. A fixing device for heating and fixing an unfixed image to a record member bearing said unfixed image, comprising:

a heating roller having a core roller and a layer of a resistance heating material formed on an outer peripheral surface of said core roller and operable to generate heat when an electric current flows therethrough;

a pair of carriers rotatably carrying end portions of said heating roller;

a pair of ring-shaped current receiver members each located between said carrier and a center of said heating roller, being adapted to rotate together with said heating roller and electrically connected to said resistance heating material layer;

a pair of current supply members being in contact with and electrically connected to said current receiver members, respectively; and

insulating members made of an electrical insulation material, each being in contact with an outer end of said current receiver member and extending toward said carrier

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neighboring to said corresponding current receiver member, wherein

a distance L3 from the inner end of said carrier to the outer end of said current receiver member neighboring to said carrier is 1 mm or more, a sum (L1+L2) of a width L1 of said insulating member and a height L2 of roller is 2.5 mm or more, and said distance L3 and said width L1 satisfy a relationship of  $L3 \geq L1$ .

THE PRIOR ART

The references relied upon by the examiner to reject the appealed claims are:

Kogure et al. (Kogure) 1989	4,813,372	Mar. 21,
Watanabe 1996	5,575,942	Nov. 19,

THE REJECTIONS ON APPEAL

Claims 1 through 7 stand finally rejected under 35 U.S.C. § 102(b) as being anticipated by Kogure.

Claims 9 through 16 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Kogure in view of Watanabe.

Attention is directed to the appellant's main and reply briefs (Paper Nos. 18 and 20) and to the examiner's answer (Paper No. 19) for the respective positions of the appellant and the examiner with regard to the merits of these

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rejections.

## DISCUSSION

### I. Claim 8

In the final rejection (Paper No. 11), the examiner also (1) rejected claims 1 through 8 under 35 U.S.C. § 102(b) as being anticipated by Japanese patent document 4-305679 and (2) applied the Japanese reference as an alternative to Kogure in the 35 U.S.C. § 103(a) rejection of claims 9 through 16.

Inasmuch as the examiner's answer does not restate either of the rejections based on the Japanese reference, both are assumed to have been withdrawn by the examiner sua sponte (see Ex parte Emm, 118 USPQ 180, 181 (Bd. App. 1957)). As a result, claim 8 has no rejection outstanding thereagainst.

### II. The 35 U.S.C. § 102(b) rejection of claims 1 through 7 as being anticipated by Kogure

Kogure discloses a thermal roller 1 for fixing toner images on recording sheets. The Figure 10 embodiment relied upon by the examiner comprises a support cylinder having end shafts 1B rotatably supported by heat-insulating bushings 5 and heat-resistant bearings 6. The thermal components of the

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roller include a pair of power supply rings 7, a first insulating layer 21, a resistive heat-generating layer 22, a second insulating layer 23 and a surface layer 24. As shown in Figure 10, these thermal components are arranged on the support cylinder such that portions of the first and second insulating layers are disposed between each power supply ring 7 and the neighboring bushing/bearing assembly 5, 6. Kogure teaches that each of the insulating layers 21 and 23 has a thickness of about 1 mm and that the resistive heat-generating layer 22 has a thickness at the center of the roller of about 100 to 150 Fm (.1 to .15 mm) and a thickness at the ends of the roller which is reduced relative to the center thickness by about 20% or less (see column 6, lines 26 through 44; and column 8, lines 40 through 44).

Anticipation is established only when a single prior art reference discloses, expressly or under principles of inherency, each and every element of a claimed invention. RCA Corp. v. Applied Digital Data Sys., Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984).

As indicated above, independent claim 1 recites a fixing device wherein the distance L3 from the inner end of a carrier

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to the outer end of the current receiver member neighboring the carrier is 1 mm or more, a sum ( $L1+L2$ ) of the width  $L1$  of the insulating member and the height  $L2$  of the insulating member is 2.5 mm or more, and the distance  $L3$  and the width  $L1$  satisfy a relationship of  $L3 \geq L1$ . Reading the limitations in claim 1 relating to the carriers, current receiver members and insulating members on Kogure's bushing/bearing assemblies 5, 6, power supply rings 7 and the portions of insulating layers 21, 23 disposed between each power supply ring 7 and the neighboring bushing/bearing assembly 5, 6, respectively, the examiner finds that the claim limitations relating to  $L1$ ,  $L2$  and  $L3$  are met by the corresponding parameters in Kogure (see pages 2 and 3 in the answer). According to the examiner, this finding is factually supported by Kogure's disclosure of the thicknesses of insulating layers 21 and 23 and heat-generating layer 22 and depiction in Figure 10 of the relative dimensions of the roller elements shown therein.

Kogure's disclosure of the thicknesses of insulating layers 21 and 23 and heat-generating layer 22 provides reasonable support for finding, as the examiner does, that Kogure's "insulating members" (the portions of insulating

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layers 21, 23 disposed between each power supply ring and the neighboring bushing/bearing assembly) have a height (L2) of slightly more than 2 mm. Given the lack of any other relevant teaching in Kogure's specification, the examiner's related determination that Kogure meets the limitations in claim 1 relating to L1, L2 and L3 necessarily depends on the relative dimensions shown in Kogure's Figure 10. Kogure, however, does not indicate that the drawings are to scale. Under this circumstance, it is well established that patent drawings do not define the precise proportions of the elements shown therein and may not be relied on to show particular sizes if the specification is completely silent on

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the issue. Hockerson-Halberstadt, Inc. v. Avia Group Int'l, 222 F.3d 951, 956, 55 USPQ2d 1487, 1491 (Fed. Cir. 2000); also see In re Wright, 569 F.2d 1124, 1127, 193 USPQ 332, 335 (CCPA 1977); In re Olson, 212 F.2d 590, 592, 101 USPQ 401, 402 (CCPA 1954). The unreliability of Kogure's drawings in this regard is highlighted by the analysis set forth in the appellant's reply brief which demonstrates that the relative dimensions shown in Figure 10 are not even consistent with the insulating and heat-generating layer thicknesses expressly specified in the underlying specification. Thus, the examiner's reliance on Figure 10 to establish that Kogure meets the L1, L2 and L3 limitations in claim 1 is not well founded.

Accordingly, we shall not sustain the standing 35 U.S.C. § 102(b) rejection of claim 1, or of claims 2 through 7 which depend therefrom, as being anticipated by Kogure.

III. The 35 U.S.C. § 103(a) of claims 9 through 16 as being unpatentable over Kogure in view of Watanabe

Independent claim 9 is essentially similar to independent claim 1 and also requires that the distance L3 from the inner end of a carrier to the outer end of the current receiver

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member neighboring the carrier is 1 mm or more, a sum ( $L1+L2$ ) of the width  $L1$  of the insulating member and the height  $L2$  of the insulating member is 2.5 mm or more, and the distance  $L3$  and the width  $L1$  satisfy a relationship of  $L3 \geq L1$ .

For the reasons discussed supra, the examiner's reliance on Kogure to meet these limitations is unsound. Moreover, the above noted unreliability of Kogure's drawings forestalls any conclusion that Kogure would have suggested a fixing device meeting these limitations. Watanabe, cited by the examiner for its disclosure of a heating roller having thermal elements on an inner surface thereof, does not cure these deficiencies.

Therefore, we shall not sustain the standing 35 U.S.C. § 103(a) rejection of claim 9, or of claims 10 through 16 which depend therefrom, as being unpatentable over Kogure in view of Watanabe.

#### IV. Additional matters for consideration by the examiner

Upon return of this application file to the technology center, the examiner should consider whether the lack of proper antecedent basis for the terms "said carrier" (claims 1, 3, 9, 11, 23 and 25), "said current receiver member" (claims 1, 3, 9, 11, 23 and 25), "said insulating member"

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(claims 1 and 9) and "said outer insulating member" (claim 23)  
is deserving of correction. The examiner should also consider  
whether the

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recitations in claims 1, 9 and 23 that the layer of resistance heating material is formed "on" a peripheral surface of the core roller is inconsistent with associated dependent claims 5, 13 and 27 and the underlying specification which recite and disclose, respectively, that the layer of resistance heating material is formed on an electrical insulation layer which itself is formed on the outer peripheral surface of the core roller.

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SUMMARY

The decision of the examiner:

a) to finally reject claim 8 is assumed to have been  
withdrawn by the examiner sua sponte; and

b) to finally reject claims 1 through 7 and 9 through 16  
is reversed.

REVERSED

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CHARLES E. FRANKFORT	)	
Administrative Patent Judge	)	
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	)	
	)	BOARD OF PATENT
LAWRENCE J. STAAB	)	
Administrative Patent Judge	)	APPEALS AND
	)	
	)	INTERFERENCES
	)	
JOHN P. McQUADE	)	
Administrative Patent Judge	)	

JPM:hh

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