

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today
(1) was not written for publication in a law journal and
(2) is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HIDEKI KAMAJI,
MASAE IKEDA, KAZUNORI HIROSE,
HIROSHI NOU, MASAHIRO WANOU,
TETUROU NAKASHIMA,
MASATOSHI KIMURA and YUKIO NISHIO

Appeal No. 1996-3506
Application 08/178,439¹

HEARD: OCTOBER 20, 1999

Before THOMAS, RUGGIERO and HECKER, **Administrative Patent Judges.**

HECKER, **Administrative Patent Judge.**

DECISION ON APPEAL

¹Application for patent filed January 6, 1994. According to appellants, this application is a continuation of Application 07/909,405, filed July 6, 1992 (abandoned).

Appeal No. 1996-3506
Application 08/178,439

This is a decision on appeal from the final rejection of claims 11 through 17, all claims pending in this application. Claims 1 through 10 and 18 through 21 were canceled by an amendment after final rejection, Paper No. 22.

The invention relates to an electrophotographic recording apparatus such as a copying machine, a laser printer or the like. In particular, referring to Figure 1, the apparatus has a photosensitive drum 10 on which an electrostatic latent image can be written, a brush charger 12, a conductive blade 16c for uniformly regulating a thickness of the developer on developing roller 16b, an electric source 42 for applying electric energy to the blade 16c to electrically charge the developer layer by a charge-injection effect, and a conductive transfer roller 20. When paper is passed through a nip between the drum 10 and the transfer roller 20, the opposite charge polarity of transfer roller 20 transfers the developed image from drum 10 to the paper.

Representative independent claim 11 is reproduced as follows:

11. An electrophotographic recording apparatus comprising:

Appeal No. 1996-3506
Application 08/178,439

photosensitive body means;

conductive contacting type charger means for producing an electrically-charged area on said photosensitive body means;

optical writing means for forming an electrostatic latent image on the electrically-charged area of said body means;

developing means for electrostatically developing the electrostatic latent image of said body means as a charged visible image with an electrostatically-charged one-component developer; and

transferring means for electrostatically transferring the charged visible image developed by said developing means from said body means to a recording medium,

wherein said developing means includes a conductive developing roller member for entraining the developer to form a developer layer therearound and for bringing the developer layer to said body means for the development of the latent image, a conductive regulating blade member resiliently engaged with said developing roller for uniformly regulating a thickness of the developer layer formed therearound, and charge injection effect means for electrically charging the developer layer by applying a developer bias voltage to said conductive developing roller member and electric energy to said regulating blade member, and

wherein said transferring means includes a conductive transfer roller member in contact with said body means, and an electric source for applying an electric energy to said conductive transfer roller member to give the recording medium an electric charge having a polarity opposite to that of the charged visible image, during a passage of the recording medium through a nip between said body means and said conductive transfer roller member.

The Examiner relies on the following references:

Appeal No. 1996-3506
Application 08/178,439

Hosoya et al. (Hosoya)	4,967,231	Oct. 30, 1990
Kohyama	5,148,219	Sep. 15, 1992
		(filed May 31, 1990)
Nishio et al. (Nishio)	EPO 0404561	Dec. 27, 1990

Claims 11 through 14 stand rejected under 35 U.S.C. § 103 as being unpatentable over Nishio² in view of Hosoya. Claims 15 through 17 stand rejected under 35 U.S.C. § 103 as being unpatentable over Nishio in view of Hosoya and further in view of Kohyama.

Rather than reiterate the arguments of Appellants and the Examiner, reference is made to the brief, reply brief and answer for the respective details thereof.

OPINION

After a careful review of the evidence before us, we will sustain the rejection of claims 11 through 17 under 35 U.S.C. § 103.

At the outset, we note that Appellants have indicated on page 4 of the brief the claims stand or fall together in two groups. Group I being claims 11 through 14, and group II being claims 15 through 17.

² The brief and answer refer to Nishio as EP 0404561.

Appeal No. 1996-3506
Application 08/178,439

It is the burden of the Examiner to establish why one having ordinary skill in the art would have been led to the claimed invention by the reasonable teachings or suggestions found in the prior art, or by a reasonable inference to the artisan contained in such teachings or suggestions. ***In re Sernaker***, 702 F.2d 989, 995, 217 USPQ 1, 6 (Fed. Cir. 1983).

With regard to the rejection of the Group I claims, 11 through 14, we will consider claim 11 as the representative claim.

Appellants argue throughout their brief that the claimed invention provides a quality image "in an environment of high temperature and high air moisture content" (e.g. brief-page 6). This argument fails at the outset because it is not based on any limitation appearing in the claims. Thus, the environmental conditions are immaterial. See ***In re Self***, 671 F.2d 1344, 1350, 213 USPQ 1, 5 ((CCPA 1982).

Appellants argue "[n]either EP 0404561 [Nishio] nor Hosoya et al. discloses the critical combination of the charge

Appeal No. 1996-3506
Application 08/178,439

injection means and the conductive transfer member" (brief-page 7), and that there is no motivation to combine Nishio and Hosoya, to do so requires impermissible hindsight.

The Examiner's position is that Nishio describes the developing section of an electrophotographic recording apparatus which is the same as Appellants', and absent any disclosed transfer section one must look elsewhere for appropriate transfer sections. Looking at Hosoya, the Examiner contends that it would have been obvious to use the transfer section of Hosoya in Nishio.

We agree with the Examiner. Nishio teaches Appellants' developing section with exactly the same components, conductive roller 18b and resiliently engaged conductive blade 20. Blade 20 is biased to provide a charge injection effect as claimed. Note Nishio, column 3 lines 9-12 (conductive roller), column 3 lines 31-32 (resiliently engaged blade), column 3 lines 36-40 (blade biased for charge injection effect). Since Nishio does not disclose a transfer section, which is a necessary section in any electrophotographic recording apparatus, one skilled in the art would have to look elsewhere. Looking at Hosoya we see a

Appeal No. 1996-3506
Application 08/178,439

very similar electrophotographic recording apparatus, including a conductive roller and blade. In fact, Figure 17 of Hosoya teaches just about everything taught in Nishio, except, there is no specific recitation indicating Appellants' claimed charge injection effect. Such an effect is highly probable in Hosoya since blade 91 is biased in the same manner as in Nishio and in Appellants' invention. Hosoya is also a good candidate for a relevant transfer section because Appellants' invention, Nishio and Hosoya all relate to a one component developer. Thus, looking at Hosoya we find several image transfer sections disclosed. The claimed conductive transfer roller can be found in Figure 20 as element 95, as noted by the Examiner. Thus we find ample motivation to combine the teachings of Nishio and Hosoya. "It should be too well settled now to require citation or discussion that the test for combining references is not what the individual references themselves suggest but rather what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art." *In re McLaughlin*, 443 F.2d 1392, 1395, 170 USPQ 209, 212 (CCPA 1971).

Appellants also argue:

Appeal No. 1996-3506
Application 08/178,439

According to the subject matter of independent claim 11, the conductive regulating blade member (16c) and the conductive transfer roller member (20) are synergistically combined with each other.

This synergistic effect could not have been known by anyone without building the apparatus of the present invention and conducting experiments having the results as shown in the graphs of Figs. 6 and 7 of this application. (Brief-pages 6 and 7.)

Looking at Appellants' Figure 6 we see that charge injection (curve C) performs better than triboelectrification (curve D). Looking at Figure 7 we see that a conductive transfer roller (curve E) performs better than a corona discharger (curve F). Each of the elements chosen by Appellants (charge injection and a conductive roller) provides better results than those not chosen (triboelectrification and corona discharge). Thus, we see no synergistic effect in the combination, only that which would be expected from the beneficial performance of each. Since Appellants' claimed structure has been shown to be obvious by the combination of Nishio and Hosoya, we would expect the same enhanced, but unclaimed, environmental performance.

Appeal No. 1996-3506
Application 08/178,439

For the above reasons, we will sustain the rejection of claim 11 and therefore the rejection of claims 12, 13 and 14 which stand or fall therewith.

With regard to the 35 U.S.C. § 103 rejection of claims 15 through 17 (group II), Appellants state "Claims 15-17 are allowable over the prior art of record for the same reasons as discussed above under I [group I]." (brief-page 9.) Thus, for the same reasons as discussed with regard to claim 11, *supra*, we will sustain the rejection of claims 15 through 17. We note however, claim 15 recites that the conductive contacting charger (Appellants' element 12) is a conductive rotary brush. Hosoya teaches the use of a conductive contacting roller charger in Figure 13 as element 73. We agree with the Examiner that it would have been obvious to one of ordinary skill in the art to have used a conductive rotary brush in place thereof as taught by Kohyama as element 2 in Figure 1.

In view of the foregoing, the decision of the Examiner rejecting claims 11 through 17 under 35 U.S.C. § 103 is affirmed.

Appeal No. 1996-3506
Application 08/178,439

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

	JAMES D. THOMAS)	
	Administrative Patent Judge)	
)	
)	
	JOSEPH F. RUGGIERO)	BOARD OF
PATENT	Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
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	STUART N. HECKER)	
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Appeal No. 1996-3506
Application 08/178,439

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