

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 17

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HITOSHI WATANABE,
TETSUYA HASHIMOTO and YOSHIKAZU HARA

Appeal No. 2001-1209
Application No. 09/106,281

ON BRIEF

Before HAIRSTON, FLEMING and RUGGIERO, Administrative Patent Judges.

RUGGIERO, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal from the final rejection of claims 2-9, which are all of the claims pending in the present application. Claim 1 has been canceled. An amendment filed July 24, 2000 after final rejection was denied entry by the Examiner.

The claimed invention relates to a sheet carrier apparatus including a platen roller with a circumferential surface made of elastic material, the platen roller being rotated to convey a sheet, such as a stencil sheet, between the platen roller and a thermal head. Further provided is a processor which regulates the rotational speed of the platen roller based on a signal from a temperature sensor which detects the temperature of the platen roller, thereby transferring the sheet at a constant speed regardless of the temperature of the platen roller.

Claim 2 is illustrative of the invention and reads as follows:

2. A sheet carrier apparatus for conveying a sheet, comprising:

a thermal head,

a platen roller having a cylindrical circumferential surface made of an elastic material and pressed against the thermal head, said platen roller being rotated to convey said sheet between said platen roller and said thermal head,

a temperature sensor for detecting a temperature of said platen roller,

processing means electrically connected to the temperature sensor for setting a rotational speed of said platen roller based on a detection signal from said temperature sensor, and

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a motor connected to the platen roller for rotating the same at a speed set by the processing means so that the sheet is transferred by the platen roller at a predetermined speed regardless of a temperature of the platen roller.

The Examiner relies on the following prior art:

Fukumoto et al. (Fukumoto)	5,160,944	Nov. 03, 1992
Pfeuffer	5,170,215	Dec. 08, 1992
Masaru	JP 08-090747	Apr. 09, 1996
(Published Japanese Patent Application)		

Claims 2-9 stand finally rejected under 35 U.S.C. § 103(a). As evidence of obviousness, the Examiner offers Fukumoto in view of Pfeuffer with respect to claims 2-8, and adds Masaru to the basic combination with respect to claim 9.

Rather than reiterate the arguments of Appellants and the Examiner, reference is made to the Brief (Paper No. 13) and the Supplemental Examiner's Answer (Paper No. 16) for the respective details.¹

OPINION

We have carefully considered the subject matter on appeal, the rejections advanced by the Examiner and the evidence of obviousness relied upon by the Examiner as support for the

¹ The Examiner submitted the Supplemental Examiner's Answer in response to a remand from the Board. In this decision, we will refer to the Supplemental Examiner's Answer as simply the Answer.

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rejections. We have, likewise, reviewed and taken into consideration, in reaching our decision, Appellants' arguments set forth in the Briefs along with the Examiner's rationale in support of the rejections and arguments in rebuttal set forth in the Examiner's Answer.

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would have suggested to one of ordinary skill in the art the obviousness of the invention as recited in claims 2-4 and 6-9. We reach the opposite conclusion with respect to the Examiner's obviousness rejection of claim 5. Accordingly, we affirm-in-part.

Appellants' arguments in response to the Examiner's obviousness rejections of the appealed claims are organized according to a suggested grouping of claims indicated at page 4 of the Brief. We will consider the appealed claims separately only to the extent separate arguments for patentability are presented. Any dependent claim not separately argued will stand or fall with its base claim. Note In re King, 801 F.2d 1324, 1325, 231 USPQ 136, 137 (Fed. Cir. 1986); In re Sernaker, 702 F.2d 989, 991, 217 USPQ 1, 3 (Fed. Cir. 1983).

With respect to independent claim 2, the representative claim for Appellants first suggested grouping (including claims 2-4 and 6-8)², the Examiner, as the basis for the obviousness rejection proposes to modify the sheet carrier apparatus disclosure of Fukumoto. According to the Examiner, although Fukumoto expresses a desire to maintain a constant speed of the sheet conveying platen roller, Fukumoto is "... silent on whether or not the variation in diameter of the platen roller 1 due to temperature change during the printing operation has been taken into consideration...." (Answer, page 4). To address this deficiency, the Examiner turns to Pfeuffer which describes a sheet carrier apparatus in which a detected sheet conveying roller temperature signal is used to adjust the rotational speed of the roller speed control motor to maintain an optimum constant velocity. In the Examiner's analysis (id.), the skilled artisan would have been motivated and found it obvious to provide the system of Fukumoto with the temperature dependent roller speed

² Although Appellants' grouping at page 3 of the Brief does not include dependent claim 6, which is not separately argued in the Brief, as part of any group, it is apparent that claim 6 should properly be including in this grouping with its base claim, i.e., independent claim 2.

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control taught by Pfeuffer "... in order to maintain a constant sheet conveying speed regardless of temperature fluctuations in the platen roller so as to ensure the quality of sheet printing and conveying operation."

After reviewing the Examiner's analysis, it is our view that such analysis carefully points out the teachings of the Fukumoto and Pfeuffer references, reasonably indicates the perceived differences between this prior art and the claimed invention, and provides reasons as to how and why the prior art teachings would have been modified and/or combined to arrive at the claimed invention. In our opinion, the Examiner's analysis is sufficiently reasonable that we find that the Examiner has at least satisfied the burden of presenting a prima facie case of obviousness. The burden is, therefore, upon Appellants to come forward with evidence and/or arguments which persuasively rebut the Examiner's prima facie case of obviousness. Only those arguments actually made by Appellants have been considered in this decision. Arguments which Appellants could have made but chose not to make in the Brief have not been considered [see 37 CFR § 1.192(a)].

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Appellants' arguments in response to the obviousness rejection initially assert that the Examiner has failed to establish a prima facie case of obviousness since all of the claimed limitations are not taught or suggested by the applied prior art references. After careful review of the applied Fukumoto and Pfeuffer references in light of the arguments of record, we find Appellants' assertions to be unpersuasive. In our view, Appellants' arguments unpersuasively focus on the individual differences between the limitations of representative claim 2 and each of the applied references. It is apparent, however, from the Examiner's line of reasoning in the Answer, that the basis for the obviousness rejection is the combination of Fukumoto and Pfeuffer. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. In re Keller, 642 F. 2d 413, 425, 208 USPQ 871, 881 (CCPA 1981); In re Merck & Co., Inc., 800 F. 2d 1091, 1096, 231 USPQ 375, 380 (Fed. Cir. 1986).

In other words, while Appellants contend that Fukumoto "... does not have a temperature sensor, nor the processing means for setting the rotational speed of the platen roller based on the

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detection signal from the temperatures sensor" (Brief, page 5), the feature of temperature dependent control of a platen roller is clearly taught by Pfeuffer. Further, although Appellants argue (id., at 5 and 6) that Pfeuffer heats a fuser roller and therefore fails to teach the heating of a thermal head which in conjunction with a platen roller transfers a sheet, this teaching is specifically provided by Fukumoto.

We further find to be unpersuasive Appellants' assertion (Brief, page 7) that, even if combined, the resultant structure would not satisfy the claimed requirements. In Appellants' view, if the temperature sensor of the heat source in Pfeuffer, i.e., the fuser roller, were combined with Fukumoto the result would be that the temperature sensor would detect the temperature of the thermal head, not the platen roller as claimed. It is apparent to us, however, from the line of reasoning expressed in the Answer that the Examiner is not suggesting the bodily incorporation of Pfeuffer's temperature based speed controller into the system of Fukumoto. Rather, it is the disclosed technique in Pfeuffer of providing for constant speed control of a sheet transfer roller in dependence upon detected temperature

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changes that is being relied upon as a suggestion for the proposed combination. "The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference....Rather, the test is what the combined teachings of those references would have suggested to those of ordinary skill in the art." In re Keller, *supra*. See also In re Sneed, 710 F.2d 1544, 1550, 218 USPQ 385, 389 (Fed. Cir. 1983) and In re Nievelt, 482 F.2d 965, 967, 179 USPQ 224, 226 (CCPA 1973). Further, we agree with the Examiner (Answer, page 6) that the platen roller 1 in Fukumoto and the fuser roller 44 in Pfeuffer have similar functions, i.e., to transfer the print media during the printing operation.

For the above reasons, since it is our opinion that the Examiner's prima facie case of obviousness has not been overcome by any convincing arguments from Appellants, the Examiner's 35 U.S.C. § 103(a) rejection of representative independent claim 2, as well as claims 3, 4, and 6-8 which stand with claim 2, is sustained.

Turning to a consideration of the Examiner's 35 U.S.C. § 103(a) rejection of claim 9 in which the Masaru reference is

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added to the combination of Fukumoto and Pfeuffer to address the stencil sheet limitation of this claim, we sustain this rejection as well. In our view, Appellants' arguments (Brief, page 9) focus unpersuasively on the failure of Masaru to teach the claimed thermal head and platen roller temperature dependent speed control features, features which are disclosed by Fukumoto and Pfeuffer. We find no convincing arguments from Appellants that would convince us of any error in the Examiner's assertion of the obviousness to the skilled artisan of applying the platen roller temperature sensor and speed control teachings of Fukumoto and Pfeuffer to a stencil making apparatus such as that disclosed in Masaru.

Turning to a consideration of dependent claim 5, grouped and argued separately by Appellants, we note that, while we found Appellants' arguments to be unpersuasive with respect to the Examiner's obviousness rejection of claims 2-4 and 6-9 discussed supra, we reach the opposite conclusion with respect to the obviousness rejection of claim 5. As indicated by Appellants (Brief, pages 3-8), claim 5 is directed to the feature in which the platen roller expansion coefficient factor α , a component of

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the platen roller speed computing equation, is reduced for temperature ranges above a predetermined value. We don't necessarily disagree with the Examiner's assertion (Answer, page 5) that, given Pfeuffer's disclosed recognition of the relationship between platen roller speed and roller temperature variations, the skilled artisan would find it obvious to derive a mathematical equation to compute the corrected roller speed values. We find no teaching or suggestion, however, in Pfeuffer, or in any of the other prior art of record, that would support the Examiner's conclusion of the obviousness to the skilled artisan of adjusting the expansion coefficient of the platen roller at temperature ranges above and below a predetermined temperature as claimed. The Examiner must not only make requisite findings, based on the evidence of record, but must also explain the reasoning by which the findings are deemed to support the asserted conclusion. See In re Lee, 277 F.3d 1338, 1343, 61 USPQ2d 1430, 1433-34 (Fed. Cir. 2002). Accordingly, since all of the claimed limitations are not taught or suggested by the applied prior art references, the Examiner's 35 U.S.C. § 103(a) rejection of claim 5 is not sustained.

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In summary, with respect to the Examiner's 35 U.S.C. § 103(a) rejections of the appealed claims, we have sustained the rejection of claims 2-4 and 6-9, but have not sustained the rejection of claim 5. Therefore, the Examiner's decision rejecting claims 2-9 is affirmed-in-part.

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

AFFIRMED-IN-PART

KENNETH W. HAIRSTON)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
MICHAEL R. FLEMING)	APPEALS AND
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