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

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte STEVEN R. MOORE
and ERIC A. MERZ

Appeal No. 2005-0970
Application No. 09/918,760

ON BRIEF

Before JERRY SMITH, OWENS, and BLANKENSHIP, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

This appeal is from a rejection of claims 1-24, which are all of the pending claims.

THE INVENTION

The appellants claim a backlash reduction method and apparatus. Claims 1, 9 and 16 are illustrative:

1. A backlash reduction apparatus comprising:
means for advancing a substrate;
means for stopping advance of the substrate short of a final intended position; and
means for finally advancing the substrate.

9. A backlash reduction apparatus comprising;
a drive motor that can rotate in increments;
a drive train driven by the drive motor;

at least one substrate transport mechanism connected to the drive train and driven by the drive motor therethrough;

a controller comprising;

a substrate advancer in communication with the drive motor, the substrate advancer emitting control signals to the drive motor that cause the substrate to move to a point short of an intended destination; and

a substrate final advancer in communication with the drive motor, the substrate final advancer sending control signals to the drive motor that cause the substrate to continue to the intended destination.

16. A backlash reduction method comprising:

advancing a substrate to a point short of a final intended position;

finally advancing the substrate to the final intended position, thereby taking up backlash in a substrate transport system.

THE REFERENCES

Barker et al. (Barker)	4,519,700	May 28, 1985
Narita	5,149,217	Sep. 22, 1992
Nureki	6,312,177	Nov. 6, 2001

THE REJECTIONS

The claims stand rejected as follows: claims 1-12 and 14-24 under 35 U.S.C. § 102(b) as anticipated by Narita; claims 1, 3-12, 14, 16 and 18-24 under 35 U.S.C. § 102(e) as anticipated by Nureki; claim 13 under 35 U.S.C. § 103 as obvious over Narita or Nureki; and claims 2, 15 and 17 under 35 U.S.C. § 103 as obvious over Nureki in view of Barker.

OPINION

We reverse the rejections of claims 1-8 and 16-24, and affirm the rejections of claims 9-15. Under the provisions of 37 CFR § 41.50(b) we enter new grounds of rejection of claim 24.

Claims 1-8

Narita discloses a printer feed mechanism which feeds print media in increments of less than 1 mm by controlling the current to an electromagnetic clutch, rotatably supported on a medium feed roller drive shaft, so as to cause the clutch to operate intermittently (col. 1, lines 8-11 and 54-57; col. 8, lines 8-23).

Nureki discloses a line printer having a control for a motor that rotates a platen roller that feeds print paper (col. 2, lines 4-7). The motor control inhibits turbulence with low power consumption by reversing the motor by a predetermined amount before turning off the motor to stop printing, and forwardly rotating the motor by the predetermined amount before printing is started (abstract; col. 1, line 66 - col. 2, line 3).

The means clauses in the appellants' claims 1-8 are interpreted in light of the corresponding structure, material, or acts described in the appellants' specification, and equivalents thereof. *See In re Donaldson*, 16 F.3d 1189, 1193, 29 USPQ2d 1845, 1848 (Fed. Cir. 1994)(in banc).

The appellants' specification discloses, in an exemplary embodiment (page 4, paragraph 12):

> If the driven roll 12 has coasted ahead, for example, M steps, (where M<N) due to system backlash and load inertia, then the motor 11 will advance M steps until all the backlash has been cleared from the drive train 13. Both motor 11 and driven roll 12 will then advance N-M steps in unison to arrive at the intended

final destination 32, the desired park position for the next print.

The examiner has not interpreted the means clauses in the appellants' claims 1-8 in light of the corresponding structure described in the appellants' specification, and equivalents thereof, and explained how Narita or Nureki discloses such structure or equivalents. The examiner, therefore, has not carried the burden of establishing a *prima facie* case of anticipation of the apparatus claimed in the appellants' claims 1-8. Accordingly, we reverse the rejections of those claims.[1]

Claims 9-15

The appellants state that claims 9-15 stand or fall together (brief, page 3). We therefore limit our discussion to one claim in this group, i.e., claim 9. *See In re Ochiai*, 71 F.3d 1565, 1566 n.2, 37 USPQ2d 1127, 1129 n.2 (Fed. Cir. 1995); 37 CFR § 1.192(c)(7)(1997).

Rejection over Narita

Narita discloses an apparatus comprising a step motor (1A), a drive train driven by the step motor (col. 3, lines 37-40), a card medium transport mechanism connected to the drive train and driven by the step motor (col. 4, lines 11-28), and an

[1] The examiner does not rely upon Barker for any disclosure that remedies the above-discussed deficiency in Nureki as to claim 2.

electromagnetic clutch which controls a clutch mechanism such that the card medium transport mechanism's feed roller advances intermittently (col. 2, lines 7-22 and 54-57; col. 8, lines 8-23).

The appellants argue that Narita's device for incrementally advancing the card medium stops the card medium but does not stop it short of a particular desired position (brief, pages 5-6; reply brief, page 3). The appellants' claim 9 requires that the substrate is moved to a point short of an intended destination. Narita's intended destination is the end of the printing. Each incremental movement of the card medium stops the card medium short of that intended destination.

The appellants argue that Narita's substrate advancer does not emit signals to stop the substrate short of a final destination (brief, page 7). Narita's clutch control medium that controls the clutch mechanism sends electric current (signals) to the clutch mechanism to cause the intermittent movement of the card medium feed roller (col. 2, lines 30-57), thereby stopping the card medium at each intermittent position short of the final destination.

The appellants argue that Narita does not disclose reducing backlash (brief, page 5; reply brief, page 2). Backlash reduction is recited in claim 9 only in the claim's preamble. A term appearing in a preamble is limiting when it is found to be

required to confer meaning on the claim. *See Phillips Petroleum Co. v. Huntsman Polymers Corp*., 157 F.3d 866, 872, 48 USPQ2d 1161, 1166 (Fed. Cir. 1998). "If the claim preamble, when read in the context of the entire claim, recites limitations of the claim, or, if the claim preamble is 'necessary to give life, meaning, and vitality' to the claim, then the claim preamble should be construed as if in the balance of the claim." *Pitney Bowes Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1165 (Fed. Cir. 1999) (quoting *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 480-81 (CCPA 1951). "If, however, the body of the claim fully and intrinsically sets forth the complete invention, including all of its limitations, and the preamble offers no distinct definition of any of the claimed invention's limitations, but rather merely states, for example, the purpose or intended use of the invention, then the preamble is of no significance to claim construction because it cannot be said to constitute or explain a claim limitation." *Pitney Bowes,* 182 F.3d at 1305, 51 USPQ2d at 1166. All of the elements required to set forth the appellants' complete invention are included in the body of claim 9. Hence, the recitation of "backlash apparatus" in the preamble does not provide structure needed to completely define the claimed invention and, therefore, does not serve to structurally distinguish the claimed invention over Narita which,

as discussed above, discloses each element recited in the body of the claim.

We therefore find that the apparatus claimed in the appellants' claim 9 is anticipated by Narita. Accordingly, we affirm the rejection over Narita of that claim and claims 10-15 that stand or fall therewith.

Rejection over Nureki

Nureki discloses a line printer having a motor that rotates a platen roller (col. 2, lines 4-6). The line printer includes a motor control that reverses the motor by a predetermined amount before the motor is turned off to stop printing, and forwardly rotates the motor by the same amount before starting printing (col. 2, lines 10-14 and 62-63). Thus, the motor rotates in increments and necessarily is connected to a drive train that drives the platen roller.

The appellants argue that Nureki does not disclose stopping the substrate short of a desired position and finally advancing the substrate (brief, pages 8-9; reply brief, pages 4-5). That argument is not well taken because at each of Nureki's increments the substrate is stopped short of the end-of-printing position, and ultimately the substrate is advanced to the desired end-of-printing position.

The appellants argue that Nureki does not disclose a backlash reduction apparatus (reply brief, page 4). That

argument is not persuasive for the reason given above regarding the rejection over Narita.

For that above reasons we find that the apparatus claimed in the appellants' claim 9 is anticipated by Nureki. Hence, we affirm the rejection over Nureki of that claim and claims 10-15 that stand or fall therewith.

Claims 16-24

Independent claims 16 and 24 require a step of "finally advancing the substrate to the final intended position, thereby taking up backlash in a substrate transport system."

The examiner argues that "[t]he method claims 6-8[2] and 16-23 are clearly rejected based upon the rejections of the system claims above of the system since the claimed method steps are met by the normal and intended use of the system of Narita" (answer, page 5). The examiner, however, provides no evidence or reasoning which shows that the normal and intended use of Narita's apparatus reduces backlash. The examiner, therefore, has not carried the burden of establishing a *prima facie* case of anticipation by Narita of the methods claimed in the appellants' claims 16-24. We therefore reverse the rejection of those claims over Narita.

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[2] It is apparent that "method" in claims 6-8, which depend from apparatus claim 5, should be "apparatus".

In the rejections of claims 16 and 18-24 over Nureki and claim 17 over Nureki in view of Barker the examiner makes the same argument set forth with respect to the rejection of those claims over Narita, and that argument is not convincing for the reason given regarding the rejection over Narita. Accordingly, we reverse the rejections of claims 16 and 18-24 over Nureki and claim 17 over Nureki in view of Barker.

New grounds of rejection

Under the provisions of 37 CFR § 41.50(b) we enter the following new grounds of rejection of claim 24.

Claim 24 is rejected under 35 U.S.C. § 101 and under 35 U.S.C. § 112, second paragraph, as failing to particularly point out and distinctly claim the subject matter which the appellants regard as the invention.

The statutory categories under 35 U.S.C. § 101 are expressed in the alternative, i.e., process, machine, manufacture or composition of matter. Thus, the appellants' claim 24, which encompasses two statutory categories, i.e., apparatus and method, violates 35 U.S.C. § 101. *See Ex parte Lyell*, 17 USPQ2d 1548, 1551 (Bd. Pat. App. & Int. 1990).

Moreover, it is unclear whether claim 24 claims an apparatus or a method. Claim 24, therefore, is indefinite in violation of 35 U.S.C. § 112, second paragraph. *See Lyell*, 17 USPQ2d at 1552.

DECISION

The rejections of claims 1-12 and 14-24 under 35 U.S.C. § 102(b) over Narita, claims 1, 3-12, 14, 16 and 18-24 under 35 U.S.C. § 102(e) over Nureki, claim 13 under 35 U.S.C. § 103 over Narita or Nureki, and claims 2, 15 and 17 under 35 U.S.C. § 103 over Nureki in view of Barker, are reversed as to claims 1-8 and 16-24 and affirmed as to claims 9-15. New grounds of rejection of claim 24 have been entered under 37 CFR § 41.50(b).

In addition to affirming the examiner's rejection(s) of one or more claims, this decision contains a new ground of rejection pursuant to 37 CFR § 41.50(b) (effective September 13, 2004, 69 Fed. Reg. 49960 (August 12, 2004), 1286 Off. Gaz. Pat. Office 21 (September 7, 2004)). 37 CFR § 41.50(b) provides "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review."

37 CFR § 41.50(b) also provides that the appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

> (1) *Reopen prosecution*. Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the proceeding will be remanded to the examiner. . . .

> (2) *Request rehearing*. Request that the proceeding be reheard under § 41.52 by the Board upon the same record. . . .

Should the appellant elect to prosecute further before the examiner pursuant to 37 CFR § 41.50(b)(1), in order to preserve the right to seek review under 35 U.S.C. §§ 141 or 145 with respect to the affirmed rejection, the effective date of the affirmance is deferred until conclusion of the prosecution before the examiner unless, as a mere incident to the limited prosecution, the affirmed rejection is overcome.

If the appellant elects prosecution before the examiner and this does not result in allowance of the application, abandonment or a second appeal, this case should be returned to the Board of Patent Appeals and Interferences for final action on the affirmed rejection, including any timely request for rehearing thereof.

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, 37 CFR § 41.50(b)

Jerry Smith Administrative Patent Judge	)
Terry J. Owens Administrative Patent Judge	) BOARD OF PATENT) APPEALS AND) INTERFERENCES
Howard B. Blankenship Administrative Patent Judge	)

TJO/eld

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