

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 20

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte THOMAS ARTHUR BETT, TANAKON UNGPIYAKUL,
SHAWN TIMOTHY LEMERY and RUSSELL JOSEPH BRUMM

Appeal No. 2002-1732
Application No. 09/338,238

ON BRIEF

Before KRASS, GROSS and BARRY, Administrative Patent Judges.

KRASS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1-34 and 41-73.

The invention is directed to a method of controlling cross-direction alignment in a manufacturing process, best illustrated by reference to representative independent claim 69, reproduced as follows:

Appeal No. 2002-1732
Application No. 09/338,238

69. A method of controlling cross-machine direction alignment of a web suitable for use in an absorbent article, with which web elements are being assembled to form work pieces on a manufacturing line, using a manufacturing process, the manufacturing line including a plurality of work stations to fabricate respective products from the respective work pieces, the method comprising:

(a) defining a machine direction manufacturing line path traversed by the web as the work pieces move from work station to work station and have work performed thereon;

(b) defining a machine direction reference path extending in the direction of the machine direction manufacturing line path and referenced to machines along the manufacturing line;

(c) establishing acceptable cross-machine direction positions of definable elements of the web along the manufacturing line path, relative to the reference path;

(d) moving the web along the manufacturing line path;

(e) using a sensor, sensing cross-machine direction positions of the definable elements of the web as the web moves along the manufacturing line path;

(f) referencing the sensed positions of the definable elements of the web to the established acceptable cross-machine direction positions thereby to define variance between the acceptable cross-machine direction positions and the sensed cross-machine direction positions; and

(g) effecting adjustment of the cross-machine direction positions of the web relative to the reference path so as to attenuate magnitude of variances being sensed by the sensor.

The examiner relies on the following references:

Gilbert	3,332,681	July 25, 1967
Toensing	3,373,912	Mar. 19, 1968
Weyenberg	5,359,525	Oct. 25, 1994
Raney	5,788,802	Aug. 4, 1998

Appeal No. 2002-1732
Application No. 09/338,238

Claims 69-71 and 73 stand rejected under 35 U.S.C. § 102(b) as anticipated by Gilbert.

Claims 69-73 stand rejected under 35 U.S.C. § 102(b) as anticipated by Toensing.

Claims 1-34 and 41-68 stand rejected under 35 U.S.C. § 103. As evidence of obviousness, the examiner cites Raney in view of Gilbert with regard to claims 1-3, 5, 6, 13, 15, 22-34 and 68, adding Weyenberg to this combination with regard to claims 4, 7-12, 14, 16-21 and 41-67.

Reference is made to the briefs and answer for the respective positions of appellants and the examiner.

OPINION

Turning, first, to the rejections under 35 U.S.C. § 102(b), it is axiomatic that an anticipatory reference is one which describes all of the elements of the claimed invention so as to have placed a person of ordinary skill in the art in possession thereof. In re Spada, 911 F.2d 205, 15 USPQ2d 1655 (Fed. Cir. 1990).

With regard to Gilbert, as it relates to independent claim 69, the examiner states that Gilbert discloses a web feeding device including sensors 24-26 that are aligned in order to

Appeal No. 2002-1732
Application No. 09/338,238

adjust the web supports 21-23 so as to keep the edges of the webs in a common vertical plane and such disclosure anticipates the subject matter of claim 69.

The examiner's rationale appears reasonable to us and, in the absence of any convincing evidence to the contrary, we hold that the examiner has presented a prima facie case of anticipation.

It is appellants' view that Gilbert does not disclose, or even mention, a "reference path" as claimed. While it may be true that Gilbert does not use the term, "reference path" in haec verba, it appears reasonable to us that the edge of the web of cloth in Gilbert, being maintained in a common vertical plane, as explained at column 2, lines 67-71, is kept on a "reference path" defined by the common vertical plane.

Appellants argues that their reference path contemplates a degree of continuity of the reference element along a direction of advance of the elements on which work is being performed (principal brief-page 6). We find nothing in claim 69 regarding a "degree of continuity" but even so, there is a certain degree of continuity of the edge of the cloth in Gilbert along a direction of advance (e.g., left to right in Gilbert's Figure 1) of the cloth upon which work is being performed.

Appeal No. 2002-1732
Application No. 09/338,238

At page 7 of the principal brief, appellants assert arguments regarding the positioning of a sensor anywhere along a length of the manufacturing line and having a reference, separate from the sensor, already in place, against which the sensor can sense or measure location of an element to be sensed. Again, we find no language in the claim corresponding to appellants' argument and, as such, the argument is not persuasive. Even so, the sensors, or monitoring means, 24-26, in Gilbert measure or sense when the edge of the element, or cloth, is not in the common vertical plane and act to make sure that the edge does align with this plane.

Appellants' arguments regarding position registration in Gilbert being upstream from a location where work changes a raw material into a transformed work piece and regarding isolated reference points and single substrates (pages 7-8 of the principal brief) are not persuasive as we fail to understand the relevance of these arguments to the instant *claimed* subject matter.

Similarly, at page 9 of the principal brief, appellants argue that claim 69 provides for a "generally continuous reference path." We find no such language in claim 69 and, as

Appeal No. 2002-1732
Application No. 09/338,238

such, any argument directed to this non-existent claim limitation is not persuasive.

In the reply brief, appellants argue that their "reference path" is not defined by a plane but, rather, it is a line in a plane. We find no language in claim 69 which distinguishes over the reference path provided by the intersection of the edge of the web of cloth with the common vertical plane in Gilbert.

Accordingly, since appellants have not convinced us of any error in the examiner's case, we will sustain the rejection of claims 69-71 and 73 under 35 U.S.C. § 102(b).

Turning to the rejection under 35 U.S.C. § 102(b) over Toensing, the examiner's position is that Toensing anticipates claims 69-73 because Toensing shows a web feeding apparatus with sensors 55 and 56 in levelers 15-17 that keep the edge of the web at a constant position transverse to the machine direction as the web passes through a plurality of work stations.

Again, as broadly as the invention is set forth in independent claim 69, the examiner appears, to us, to set forth a reasonable case regarding Toensing's applicability to claim 69 and thus establishes a prima facie case of anticipation.

For their part, appellants repeat the same arguments made regarding the rejection based on Gilbert. We find no basis in

Appeal No. 2002-1732
Application No. 09/338,238

the claim language for these arguments. Arguments based on limitations not appearing in the claims are not persuasive. In re Self, 671 F.2d 1344, 213 USPQ 1 (CCPA 1982).

With regard to Toensing not disclosing a reference path, we agree with the examiner that levelers 15-17 of Toensing cause the edge of the web to stay level. As pointed out by the examiner, at page 6 of the answer, the photocells 55 and 56 of Toensing, fixed to frames 20, define a reference plane. Where the web intersects with that reference plane, we have a reference path with which any element being aligned can be aligned.

Since appellants provide no convincing arguments regarding the rejection of claims 69-73 under 35 U.S.C. § 102(b) over Toensing, we will sustain this rejection.

Turning to the rejections under 35 U.S.C. § 103, it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive

Appeal No. 2002-1732
Application No. 09/338,238

at the claimed invention. Such reason much stem from some teachings, suggestions or implications in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). If that burden is met, the burden then shifts to the applicant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. See Id.; In re Hedges, 783 F.2d 1038, 1040, 228 USPQ 685, 687 (Fed. Cir. 1986); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and In re Rinehart, 531 F.2d 1048, 1051, 189 USPQ 143, 146-147 (CCPA 1976). Only those arguments actually made by appellant have been considered in this decision. Arguments which

Appeal No. 2002-1732
Application No. 09/338,238

appellant could have made but chose not to make in the brief have not been considered and are deemed to be waived [see 37 CFR 1.192 (a)].

The examiner contends that Raney shows cameras 140, 142 and 143 from which images are compared with reference image data to adjust the relative positions of webs 22, 24 and 26, but that Raney does not show aligning the webs with respect to a machine direction reference path. The examiner then turns to Gilbert for a web feeding device including sensors 24-26 that are aligned in order to adjust the web supports 21-23 transverse to the machine direction to keep the edges of the webs in a common vertical plane.

The examiner concludes that it would have been obvious to modify the device of Raney with the teachings of Gilbert so that the edges of the webs are aligned with respect to a common vertical plane so that the edges are aligned with each other and with the machine (answer-page 4).

We will sustain the rejection of claims 1-4 and 8-16 under 35 U.S.C. § 103 because appellants do not argue or question the combinability of the references in the manner suggested by the examiner. Rather, appellants merely repeat their arguments alleging no teaching by the references of a reference path, of a

Appeal No. 2002-1732
Application No. 09/338,238

path extending in the direction of a manufacturing line path, of a path having a "degree of continuity," etc. As stated supra, we are not persuaded by arguments to limitations not appearing in the claims. Moreover, as we explained supra, Gilbert does provide for a "reference path," as broadly claimed, in the line where the edge of the cloth intersects the common vertical plane. Thus, absent any convincing arguments by appellants regarding why these references would not have, or could not have, been combined in the manner set forth by the examiner, we will sustain the examiner's rejections.

With regard to claims 5 and 6, appellants argue that these claims require that the reference path represents a centerline of the manufacturing line and that Gilbert, at best, teach sensing an edge of the web. The examiner's response is that since the reference paths of both Gilbert and Toensing would be parallel to the centerline of the manufacturing line, the reference paths of these references would also serve as references to the centerline and that "since the centerline and the reference path are both fixed and parallel; to know one is to know the other" (answer-page 6).

We will not sustain the rejection of claims 5 and 6 because the examiner's argument is not persuasive of obviousness, within

Appeal No. 2002-1732
Application No. 09/338,238

the meaning of 35 U.S.C. § 103. Merely because the reference line (the edge of the web) in Gilbert and Toensing is parallel to the centerline of the manufacturing line does not, in and of itself, make it obvious to have the reference line represent a centerline of the manufacturing line. The examiner has pointed to no teaching in the references which would have led the artisan to make such a modification nor is there any evidence of record that it would have been obvious to do so.

With regard to claims 22 and 23, appellants argue that no reference teaches the storing of a full digitized visual image in permanent memory. The examiner points to column 10, lines 12-49 of Raney.

The portion of Raney identified by the examiner teaches that cameras are used to capture images and that those images are compared with reference image data. Appellants argue that since the reference is silent as to "digitized" images, and one cannot assume that all cameras are digital cameras, this silence is fatal to the examiner's argument. We disagree.

The rejection is under 35 U.S.C. § 103, not 35 U.S.C. § 102, so each and every claimed element need not be specifically disclosed by the reference. In our view, not only would it have been equally obvious to employ either a digital camera or a

Appeal No. 2002-1732
Application No. 09/338,238

conventional camera, but, in the case of Raney, a digital image is suggested since the camera image interacts with a computer (note column 10, lines 19-25). Hence, the artisan would have recognized the strong inference that the image is a digital image.

Further, appellants argue that Raney is silent as to the memory being "permanent." Again, the rejection is under the obviousness criteria of 35 U.S.C. § 103. Artisans would have known about permanent as well as volatile memories and the choice of one over the other is dictated by many well known factors, one of which is whether it is desired to maintain a record of the stored data or images. Where retention is desired or necessary, the artisan would have understood that a permanent memory would be used.

Accordingly, since we have satisfactorily responded to appellants' concerns regarding claims 22 and 23 and appellants' arguments do not convince us of nonobviousness, we will sustain the rejection of these claims under 35 U.S.C. § 103.

With regard to claims 24-26, appellants argue that no reference of record teaches step-wise computer assisted image analysis where the operator interacts with the computer such that the computer assists the operator step-by-step in determining

Appeal No. 2002-1732
Application No. 09/338,238

adjustments which direct the process toward alignment of the elements along the reference path.

It is the examiner's position that since Raney discloses a conventional computer, at column 10, line 20, "it can only work in a step-wise manner to do the image analysis, since that is how conventional computers work" (answer-page 7).

Appellants do not argue the "step-wise manner" part of the examiner's explanation but only that Raney does not disclose what role the computer in Raney plays and that the reference does not teach image analysis by the computer. The sole argument made by appellants in this regard is not persuasive since Raney teaches, for example, at column 10, lines 35-36, that "[t]hese images are compared with reference image data stored in the controller...". Since it is safe to assume that this comparison is not made manually, it would have been clear to an artisan that the computer is employed in the comparison. Accordingly, contrary to appellants' assertion, Raney does suggest image analysis by the computer. However, we will not sustain the rejection of claims 24-26 under 35 U.S.C. § 103 because the examiner has not indicated where, in the applied references, there is a suggestion of assisting a system operator in making adjustments. The

Appeal No. 2002-1732
Application No. 09/338,238

applied references all seem directed to fully automatic adjustments.

With regard to claims 27-33, appellants assert that no reference teaches or suggests the system logic being involved in assisting the operator in making any adjustment decisions regarding cross-direction alignment. The examiner counters that this is the exact purpose of the devices in Gilbert, Toensing, Raney and Weyenberg, i.e., alignment, positioning or registration.

Since the claims recite that the logic "assists the operator in making appropriate adjustment decisions...", we will not sustain the examiner's rejection of these claims because the examiner has not addressed the issue of operator assistance. As appellants point out, the references are all concerned with *automatically* making adjustments with no teaching of operator assistance in making the decisions. Since the examiner has not identified where, in the references, operator input is suggested, no prima facie case of obviousness has been established. Moreover, these claims depend from claim 26, the rejection of which has not been sustained.

Appeal No. 2002-1732
Application No. 09/338,238

For similar reasons, the rejection of claims 60-67 under 35 U.S.C. § 103 will not be sustained since they also contain limitations directed to operator interaction.

The rejection of claims 27-33 and 60-67 under 35 U.S.C. § 103 is not sustained.

With regard to claim 34, appellants argue that no reference teaches or suggests using a composite of first and second images to evaluate any one element of a work piece or web. The examiner counters only that Raney discloses a plurality of cameras 140, 142 and 143, at column 10, line 12.

Since the examiner has not addressed the issue of composite images, as claimed, we will not sustain the rejection of claim 34 under 35 U.S.C. § 103

With regard to claim 68, appellants argue that no reference teaches or suggests defining a reference path in a central process control apparatus such as disclosed in the instant specification. In our view, the examiner has reasonably pointed out that the computer disclosed at column 10, line 20, of Raney includes a control for the apparatus in its memory.

However, what the examiner does not address is the requirement of claim 68 that the process control apparatus defines, in its memory, "a machine direction reference path..."

Appeal No. 2002-1732
Application No. 09/338,238

There is no indication that the computer in Raney defines any such machine direction reference path. As a matter of fact, the examiner employs Gilbert for the teaching of the claimed reference path, so there would be no reason for Raney to store such information in any event.

Accordingly, we will not sustain the rejection of claim 68 under 35 U.S.C. § 103.

With regard to claims 17 and 56, appellants contend that no reference teaches or suggests a control system providing visual cues identifying elements that are outside acceptable ranges. The examiner's view is that all of the cited references include visual cues, arguing that in Gilbert and Toensing, the webs themselves provide visual cues to the photocells to indicate if the webs are in proper alignment, and that in Raney and Weyenberg, the elements that the cameras make images of provide visual cues.

We will not sustain the rejection of claims 17 and 56 under 35 U.S.C. § 103 because the claims require the visual display itself to provide visual cues. It is not enough to say that the webs of Gilbert and Toensing or the workpieces of Raney or Weyerberg provide, broadly, "visual cues" because these are not equivalent to a visual display providing such visual cues.

Appeal No. 2002-1732
Application No. 09/338,238

Consequently, we also will not sustain the rejection of claims 18-21 which depend from claim 17 or of the rejection of claim 57 which depends from claim 56.

We will sustain the rejection of claims 41-44 and 48-55 under 35 U.S.C. § 103 because appellants' arguments with regard to these claims are similar to those supra regarding a reference path, degree of continuity, etc. and we have explained why we interpret Gilbert as disclosing a reference path, as claimed, and why appellants' arguments directed to non-claimed limitations are not persuasive.

We will, however, not sustain the rejection of claim 57 under 35 U.S.C. § 103 because this claim depends from claim 56, the rejection of which we have reversed.

We will not sustain the rejection of claims 45 and 46 under 35 U.S.C. § 103 because these claims are similar to claims 5 and 6 and contain the limitations of the reference path representing a centerline of the manufacturing line which, as explained supra, are not suggested by the applied references.

We will sustain the rejection of claims 58 and 59 under 35 U.S.C. § 103 for the same reasons we sustained the rejection of claims 22 and 23 supra, i.e., appellants' arguments re permanent storage and digital images are not persuasive of

Appeal No. 2002-1732
Application No. 09/338,238

nonobviousness in view of Raney's disclosure of a computer analyzing images.

With regard to claims 7 and 47, appellants argue that no reference teaches or suggests how one might evaluate positioning of an element which has already been established. Appellants take issue with the examiner's citation of column 9, lines 62-65, of Raney regarding these claims because, according to appellants, Raney only addresses the manner or method of applying the defined areas (elements) 58, 62, which are the e.g. print eyes.

We will not sustain the rejection of these claims under 35 U.S.C. § 103 because they require human intervention in the evaluating step of claims 1 and 41, respectively. The examiner merely states that substituting manual activity for automated procedures would have been obvious. While this may, sometimes, be the case, the examiner has presented no convincing line of reasoning why that should be the case here, especially since the instant claimed invention provides for a combination, i.e., an interaction of both manual and automatic activity. That is, the evaluation step may have direct human intervention in determining

Appeal No. 2002-1732
Application No. 09/338,238

at least one measurement but there may also be automatic determination of other measurements. While it may very well have been obvious to employ direct human intervention, the examiner has offered no convincing evidence of such obviousness.

Accordingly, we will not sustain the rejection of claims 7 and 47 under 35 U.S.C. § 103.

CONCLUSION

We have sustained the rejections of claims 1-4, 8-16, 22, 23, 41-44, 48-55, 58, 59 and 69-73. We have not sustained the rejection of claims 5-7, 17-21, 24-34, 45-47, 56, 57 and 60-68.

Appeal No. 2002-1732
Application No. 09/338,238

Accordingly, the examiner's decision 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

ERROL A. KRASS)	
Administrative Patent Judge)	
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ANITA PELLMAN GROSS)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
)	
)	
)	
LANCE LEONARD BARRY)	
Administrative Patent Judge)	

EK/RWK

Appeal No. 2002-1732
Application No. 09/338,238

THOMAS D. WILHELM
KIMBERLY-CLARK WORLDWIDE, INC.
401 NORTH LAKE STREET
NEENAH, WI 54956