

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board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. 25

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JONG-SOO LEE

Appeal No. 2003-1551
Application No. 09/550,713

HEARD: August 18, 2004

Before Smith, Jerry, Levy, and Blankenship, Administrative Patent Judges.

Smith, Jerry, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's rejection of claims 1-10, which constitute all the claims in the application. A first amendment after final rejection was filed on July 19, 2002, but was not entered by the examiner. A second amendment after final rejection was filed on October 29, 2002, and was entered by the examiner.

Appeal No. 2003-1551
Application No. 09/550,713

The disclosed invention pertains to a method and apparatus for use in a projection-display system.

Representative claim 1 is reproduced as follows:

1. In a projection-display system for receiving a first light beam embodying a first image from a video device and for enlarging said image to a second image to be embodied in a second light beam adapted for projection onto a screen, said system comprising:

a polarized beam splitter (PBS) for separating the first light beam into a reflected S polarized light wave and a transmitted P polarized light wave;

a delay means for creating a half wavelength delay between the reflected S polarized light wave and the transmitted P polarized light wave;

a direction-modifying means for changing the direction of the transmitted P polarized light wave in such manner that it becomes parallel to, and travel in the same direction as, the reflected S polarized light wave; and

a condenser for condensing the reflected S polarized light wave and the transmitted P polarized light wave;

Appeal No. 2003-1551
Application No. 09/550,713

the improvement comprising: an improved PBS-and-delay device (PDD), said PDD comprising an integrally-formed means for separating the first light beam into a reflected S polarized light wave and a transmitted P polarized light wave, and for creating a half wavelength delay between the reflected S polarized light wave and the transmitted P polarized light wave.

The examiner relies on the following references:

Mitsutake et al. (Mitsutake)	5,446,510	Aug. 29, 1995
Marcellin-Dibon et al.	5,900,973	May 04, 1999
		(filed May 23, 1996)

The admitted prior art disclosed by appellant.

Claims 1-10 stand rejected under 35 U.S.C. § 103(a). As evidence of obviousness the examiner offers Mitsutake in view of the admitted prior art with respect to claims 1-3, 5 and 7-10, and the examiner adds Marcellin-Dibon to this combination with respect to claims 4 and 6.

Rather than repeat the arguments of appellant or the examiner, we make reference to the briefs and the answer for the respective details thereof.

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

Appeal No. 2003-1551
Application No. 09/550,713

rejections. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellant's 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 rejection as formulated by the examiner is not supported by the evidence of record. Accordingly, we reverse the examiner's rejection. Using our authority under 37 CFR § 41.50(b), however, we enter a new ground of rejection of independent claims 1, 7 and 9.

In rejecting claims 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 at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole

Appeal No. 2003-1551
Application No. 09/550,713

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, 1039, 228 USPQ 685, 686 (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, 1052, 189 USPQ 143, 147 (CCPA 1976). Only those arguments actually made by appellant have been considered in this decision. Arguments which 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 § 41.37(c)(1)(vii)].

Appeal No. 2003-1551
Application No. 09/550,713

We consider first the rejection of claims 1-3, 5 and 7-10 based on Mitsutake and the admitted prior art. With respect to independent claims 1, 7 and 9, the examiner finds that Mitsutake teaches the claimed invention except that Mitsutake does not make use of a half-wave plate. The examiner notes that the admitted prior art teaches that half-wave plates were well known in the art. The examiner finds that it would have been obvious to the artisan to use a half-wave plate in place of the quarter-wave plate of Mitsutake [final rejection, page 3, incorporated into answer at page 3].

With respect to independent apparatus claim 1, appellant argues that the examiner failed to provide any reasonable motivation for replacing the quarter-wave plate of Mitsutake with a half-wave plate. Appellant argues that the examiner's finding of obviousness is simply conclusory and is not based on specific evidence. With respect to independent method claims 7 and 9, appellant argues that the examiner improperly used the same reasoning as for apparatus claim 1, and that the examiner failed to consider claims 7 and 9 as methods [brief, pages 10-16].

The examiner responds by explaining why the artisan would have been motivated to combine the teachings of Mitsutake with the admitted prior art [answer, pages 3-5]. Appellant responds

Appeal No. 2003-1551
Application No. 09/550,713

that the examiner has not pointed to a single teaching, suggestion or motivation in the prior art to make the necessary modifications of Mitsutake that would arrive at the claimed invention [reply brief, pages 2-5].

We do not sustain the examiner's rejection of independent claims 1, 7 and 9 because the examiner has failed to establish a prima facie case of obviousness. Most importantly, the examiner has identified a difference between Mitsutake and the claimed invention, which in fact does not exist, and the examiner's proposed modification of Mitsutake to overcome this alleged difference makes no sense. First, the examiner's finding that Mitsutake does not teach a half-wave plate is misplaced because claims 1, 7 and 9 do not claim a half-wave plate. The claims recite, instead, a half wavelength delay. Although Mitsutake does in fact disclose a quarter-wave plate 27 in Figure 5, the light beam Ls passes through the quarter-wave plate twice so that the light beam Ls is in fact delayed by a half wavelength delay as claimed. Since Mitsutake already performs the half wavelength delay recited in the claimed invention, replacing the quarter-wave plate of Mitsutake with a half-wave plate, as proposed by the examiner, would render the Mitsutake device inoperative for its intended purpose. Because the examiner has improperly

Appeal No. 2003-1551
Application No. 09/550,713

focused his attention on the lack of a half-wave plate in Mitsutake, the examiner's complete reasoning in support of the rejection makes no sense.

Since the examiner's findings with respect to independent claims 1, 7 and 9 fail to establish a prima facie case of obviousness, we do not sustain the examiner's rejection of these claims or of claims 2, 3, 5, 8 and 10 which depend therefrom. With respect to dependent claims 4 and 6, although these claims are rejected using the additional teachings of Marcellin-Dibon, Marcellin-Dibon does not overcome the deficiencies in the basic rejection discussed above. Therefore, we also do not sustain the examiner's rejection of claims 4 and 6.

In summary, we have not sustained either of the examiner's rejections of the claims on appeal. Therefore, the decision of the examiner rejecting claims 1-10 is reversed. However, we make the following new rejection using our authority under 37 CFR § 41.50(b).

Independent claims 1, 7 and 9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the collective teachings of Mitsutake and the admitted prior art. With respect to claim 1, a polarized beam splitter (PBS) reads on PBS 26 in Figure 5 of Mitsutake. A delay means for creating a half

wavelength delay reads on quarter-plate 27 and reflecting plate 28. Since beam Ls goes through quarter-plate 27 twice, a half wavelength delay is created. A direction-modifying means reads on prism 29 which changes the direction of beam Lp so that it is parallel to the reflected S polarized light wave. Mitsutake does not disclose a condenser for condensing the reflected S polarized light wave and the transmitted P polarized light wave, but the admitted prior art in Figure 1 of appellant's application shows that it is conventional in a projection-display system for a condenser 15 to be used for condensing the S and P polarized light waves. It would have been obvious to the artisan to condense the S and P polarized light waves of Mitsutake for use in a projection-display system as taught by the admitted prior art.

The remaining portion of claim 1 recites that the PBS-and-delay device (PDD) comprises an "integrally-formed" element. Mitsutake teaches that the total reflection prism 29 may be integrally formed with a rectangular prism, positioned next to the total reflection prism of the polarizing beam splitter (PBS) [column 7, lines 5-8]. We interpret this portion of Mitsutake as suggesting to the artisan that the optical elements making up the device of Figure 5 can be integrally formed. Therefore, we find

Appeal No. 2003-1551
Application No. 09/550,713

that Mitsutake teaches the improvement portion of claim 1.

We note that at the oral hearing for this appeal, appellant's representative argued that the device in Figure 5 of Mitsutake cannot be integrally formed and that the use of the term integrally formed in Mitsutake was an error. We advised appellant's representative that on the written record before us we would assume that the literal teachings of Mitsutake are accurate. The question of whether Mitsutake fails to teach or suggest what it literally discloses is a question of fact which appellant is free to argue before the examiner. We are not prepared to accept the bare assertions of appellant's representative that Mitsutake does not teach or suggest what it specifically discloses.

With respect to method claims 7 and 9, the PBS 26 of Mitsutake separates a first light beam into S and P polarized light waves L_s and L_p . The quarter-wave plate 27 and reflection plate 28 create a half-wavelength delay as claimed. Prism 29 changes the direction of the p polarized light wave as claimed. The admitted prior art teaches condensing the S and P polarized light waves as claimed. The improvement portion of claims 7 and 9 recites steps that would be performed if the device shown in Mitsutake's Figure 5 was integrally formed as suggested by

Appeal No. 2003-1551
Application No. 09/550,713

Mitsutake at column 7, lines 5-8. Therefore, method claims 7 and 9 would have been obvious over the collective teachings of Mitsutake and the admitted prior art for the reasons discussed above.

We have limited our consideration to independent claims 1, 7 and 9. We leave it to the examiner to decide whether similar rejections can be appropriately made for the dependent claims.

In summary, we have not sustained the examiner's rejection of claims 1-10. We have entered a new rejection of claims 1, 7 and 9 under 37 CFR §41.50(b).

This decision contains a new ground of rejection pursuant to 37 CFR §41.50(b)(amended effective September 13, 2003, by final rule notice 69 Fed. Reg. 49,960, (August 12, 2004), 1286 Off. Gaz. Pat. & Trademark Office 21 (September 7, 2004)). 37 CFR § 41.50(b) provides that "A new ground of rejection...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

Appeal No. 2003-1551
Application No. 09/550,713

to the rejected claims:

(1) 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 that the proceeding be reheard under § 41.52 by the Board upon the same record. . . .

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv).

REVERSED
37 CFR § 1.196(b)

JERRY SMITH)	
Administrative Patent Judge)	
)	BORAD OF PATENT
)	
STUART S. LEVY)	APPEALS AND
Administrative Patent Judge)	
)	INTERFERENCES
)	
HOWARD B. BLANKENSHIP)	
Administrative Patent Judge)	

JS/dpv

Appeal No. 2003-1551
Application No. 09/550,713

Robert E. Bushnell
Attorney At Law
Suite 300
1522 K Street NW
Washington, DC 20005-1202