

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 24

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GEOFFREY B. RHOADS

Appeal No. 1996-3284
Application 08/154,864

ON BRIEF

Before THOMAS, HAIRSTON and LALL, Administrative Patent Judges.

LALL, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the final rejection¹ of claims 3 to 9.

¹ A first amendment after final was filed [paper no. 12 ½] but was refused entry [paper no. 13]. A second amendment after final was filed [paper no. 14] and its entry was approved by the Examiner [paper no. 17]. The amendment was

The invention is related to an apparatus and a method for enabling a viewer to perceive a 3D image from a projection panel. The screen of the invention is a 2D array of scanning lasers or other collimated light sources that serve as active light sources. In the preferred embodiment, each laser produces a pencil-like beam that is raster-scanned across the viewing auditorium. Each eye in the auditorium is illuminated with light from a given point on the screen for only a brief instant, as the laser's beam scans across that eye in its raster-scanning of the entire viewing auditorium. The eye integrates these momentary flashes of light from different points on the screen (i.e., from all of the hundreds or thousands of lasers comprising the screen) to produce an image. The invention is further illustrated by the following claim. Representative claim 3 is reproduced as follows:

3. An apparatus for projecting a 3-dimensional image into a viewing space, the apparatus comprising:

a 2-dimensional array of light producing elements;

means for modulating the light produced by the light producing elements;

directed to the specification and the drawings only.

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means for collimating light produced by the light producing elements; and

means for steering the collimated light through the viewing space to pervade the viewing space with illumination;

wherein each element produces a collimated beam of light which rasterizes a viewing space, and viewers at different positions in the viewing space perceive differing, location-dependent views of the 3-dimensional image.

The Examiner relies on the following references:

Bassett	3,335,217	Aug. 8, 1967
Ciongoli	4,692,878	Sep. 8, 1987
Garcia, Jr. (Garcia)	4,871,231	Oct. 3, 1989

Claims 3 to 9 stand rejected under 35 U.S.C. § 112, first paragraph. Claims 3, 4 and 9 stand rejected under 35 U.S.C. § 112, second paragraph. Claims 3 to 9 stand rejected under 35 U.S.C. § 102 over Ciongoli. Claims 3 to 9 also stand rejected under 35 U.S.C. § 103 over Ciongoli, Bassett and Garcia.

Rather than repeat the positions and the arguments of Appellant or the Examiner, we make reference to the briefs² and the answer for their respective positions.

OPINION

² We consider here the brief filed as paper no. 15. Also, a reply brief was filed [paper no. 19] and was entered in the record without any rebuttal from the Examiner [paper no. 20].

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We have considered the rejection advanced by the Examiner. We have, likewise, reviewed Appellant's arguments against the rejection as set forth in the brief.

It is our view, after consideration of the record before us, that the rejection of claims 3 to 9 under 35 U.S.C. § 112, first paragraph is not proper. The rejection under 35 U.S.C. § 112, second paragraph is proper with respect to claims 3 and 4, but improper with respect to claim 9. The rejection of claims 3 to 9 under 35 U.S.C. § 102 is not sustained. Also, the rejection of claims 3 to 9 under 35 U.S.C. § 103 is improper. Accordingly, we affirm-in-part. In addition, under 37 CFR § 1.196(b), we reject claim 9 under 35 U.S.C. § 102/103 and claims 3 and 4 under 35 U.S.C. § 112, first paragraph.

Next, we treat the various rejections individually.

Rejection under 35 U.S.C. § 112, first paragraph

Claims 3 to 9 are rejected as failing to provide an adequate written description of the invention [answer, pages 4 and 5].

The written description requirement serves "to ensure that the inventor had possession, as of the filing date of the application relied on, of the specific subject matter later

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claimed by him; how the specification accomplishes this is not material." In re Wertheim, 541 F.2d 257, 262, 191 USPQ 90, 96 (CCPA 1976). In order to meet the written description requirement, the appellants do not have to utilize any particular form of disclosure to describe the subject matter claimed, but "the description must clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is claimed." In re Gosteli, 872 F.2d 1008, 1012, 10 USPQ2d 1614, 1618 (Fed. Cir. 1989). Put another way, "the applicant must . . . convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention." Vas-Cath, Inc. v. Mahurkar, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991). Finally, "[p]recisely how close the original description must come to comply with the description requirement of section 112 must be determined on a case-by-case basis." Eiselstein v. Frank, 52 F.3d 1035, 1039, 34 USPQ2d 1467, 1470 (Fed. Cir. 1995) (quoting Vas-Cath, 935 F.2d at 1561, 19 USPQ2d at 1116).

Here, the Examiner raises [answer, pages 3 to 4] the "first", the "second" and the "third" points to support the

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rejection. Appellant argues [brief, page 20] against an enablement requirement instead of the written description requirement used in the rejection. However, we, on our own, have reviewed the substitute drawings and the added character numerals [whose entry has been approved by the Examiner] for the written description requirement and find that there is an adequate written description for the claimed invention. Therefore, we do not sustain the rejection of claims 3 to 9 under 35 U.S.C. § 112, first paragraph.

Rejection under 35 U.S.C. § 112, Second Paragraph

Claims 3, 4 and 9 have been rejected as being indefinite.

The second paragraph of 35 U.S.C. § 112 requires claims to set out and circumscribe a particular area with a reasonable degree of precision and particularity. In re Johnson, 558 F.2d 1008, 1015, 194 USPQ 187, 193 (CCPA 1977). In making this determination, the definiteness of the language employed in the claims must be analyzed, not in a vacuum, but always in light of the teachings of the prior art and of the particular application disclosure as it would be interpreted

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by one possessing the ordinary level of skill in the pertinent art. [Id].

The Examiner's focus during examination of claims for compliance with the requirement for definiteness of 35 U.S.C. § 112, second paragraph, is whether the claims meet the threshold requirements of clarity and precision, not whether more suitable language or modes of expression are available. Some latitude in the manner of expression and the aptness of terms is permitted even though the claim language is not as precise as the Examiner might desire. If the scope of the invention sought to be patented cannot be determined from the language of the claims with a reasonable degree of certainty, a rejection of the claims under 35 U.S.C. § 112, second paragraph, is appropriate.

Thus, for example, the failure to provide explicit antecedent basis for terms does not always render a claim indefinite. As stated above, if the scope of a claim would be reasonably ascertainable by those skilled in the art, then the claim is not indefinite. See Ex parte Porter, 25 USPQ2d 1144, 1146 (Bd. Pat. App. & Int. 1992).

Furthermore, Appellant may use functional language,

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alternative expressions, negative limitations, or any style of expression or format of claim which makes clear the boundaries of the subject matter for which protection is sought. As noted by the court in In re Swinehart, 439 F.2d 210, 160 USPQ 226 (CCPA 1971), a claim may not be rejected solely because of the type of language used to define the subject matter for which patent protection is sought.

With this as background, we analyze the specific rejection under 35 U.S.C. § 112, second paragraph, made by the Examiner of the claims on appeal. The Examiner contends [answer, page 4] that “[c]laims 3, 4, and 9 are inaccurate because the 'elements' do not produce collimated beams.” Appellant argues [brief, pages 19 to 20] that “[in] some embodiments of applicant’s invention, the light sources, themselves, produce collimated light In other embodiments, non-collimated sources (e.g. LEDs) are used in conjunction with collimating optics (e.g. lenslets). The term 'elements' may be read on ... laser sources, and may be read on ... collimating optics.”

We do appreciate the Appellant’s arguments. However,

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regarding claim 3 or claim 4, we are persuaded by the Examiner [answer, page 4] that "[t]he collimating means [and, not each element] produce collimated beams." We also find, by the Appellant's own argument above, that if there were, in the system, separate collimating means, the light source does not need to produce a collimated beam. Yet, that is what the limitation "wherein each element produces a collimated light ..." (claim 3 or 4, last three lines) implies. We find this vague and indefinite. Therefore, we sustain the rejection of claims 3 and 4 under 35 U.S.C. § 112, second paragraph. However, we find no such recitation involving "each element" in claim 9. Therefore, we do not sustain the Section 112, second paragraph rejection of claim 9.

Rejection under 35 U.S.C. § 102

The Examiner has rejected claims 3 to 9 as being anticipated by Ciongoli.

At the outset, we note that we have sustained the Section 112, second paragraph rejection of claims 3 and 4 above. We emphasize here that claims 3 and 4 each contains unclear language which renders the subject matter thereof indefinite for the reasons stated supra under our discussion of the

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rejection under 35 U.S.C. § 112, second paragraph. We find that it is not possible to apply the prior art to claims 3 and 4 in deciding the question of anticipation under 35 U.S.C. § 102 without resorting to speculation and conjecture as to the meaning of the questioned limitation in claim 3 or claim 4. This being the case, we are therefore constrained to reverse the examiner's rejection of claims 3 and 4 under 35 U.S.C. § 102 in light of the holding in In re Steele, 305 F.2d 859, 862, 134 USPQ 292, 295 (CCPA 1962). This reversal of the Examiner's rejection is based only on the procedural ground relating to the indefiniteness of these claims and therefore is not a reversal based on the merits of the rejection.

As to claims 5 to 9, we treat them on the merits of the applied prior art.

We note that a prior art reference anticipates the subject of a claim when the reference discloses every feature of the claimed invention, either explicitly or inherently (see Hazani v. Int'l Trade Comm'n, 126 F.3d 1473, 1477, 44 USPQ2d 1358, 1361 (Fed. Cir. 1997) and RCA Corp. v. Applied Digital Data Sys, Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984)).

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We have reviewed the positions of the Examiner [answer, pages 3, 5 and 6] and Appellant [brief, pages 10 to 14]. We are convinced by the Appellant's arguments. We find that Ciongoli's system operates on a totally different principle of optics than the claimed invention.

For example, lens 15 in Ciongoli focuses the beam to form images such as D' or D". We find no collimating of a beam which will achieve the "rasterizing the viewing space with a collimated beam" (claim 9, lines 3 to 4). Claim 9 is the broadest claim on appeal. Since Ciongoli cannot meet claim 9, it also cannot anticipate claims 5 to 8. Therefore, we do not sustain the anticipation rejection of claims 5 to 9 over Ciongoli.

Rejection under 35 U.S.C. § 103

Claims 3 to 9 have been rejected over Ciongoli in view of Garcia and Bassett.

At the outset, we again note that we have sustained the Section 112, second paragraph rejection of claims 3 and 4 above. We emphasize once again that claims 3 and 4 each contains unclear language which renders the subject matter thereof indefinite for the reasons stated supra under our

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discussion of the rejection under 35 U.S.C. § 112, second paragraph. We find that it is not possible to apply the prior art to claims 3 and 4 in deciding the question of obviousness under 35 U.S.C. § 103 without resorting to speculation and conjecture as to the meaning of the questioned limitation in claim 3 or claim 4. This being the case, we are therefore constrained to reverse the Examiner's rejection of claims 3 and 4 under 35 U.S.C. § 103 in light of the holding in In re Steele, 305 F.2d at 862, 134 USPQ at 295 (CCPA 1962). This reversal of the Examiner's rejection is based only on the procedural ground relating to the indefiniteness of these claims and therefore is not a reversal based on the merits of the rejection.

As to claims 5 to 9, we treat them on the merits of the applied prior art.

As a general proposition in an appeal involving a rejection under 35 U.S.C. § 103, an examiner is under a burden to make out a prima facie case of obviousness. If that burden is met, the burden of going forward then shifts to the applicant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis

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of the evidence as a whole and the relative persuasiveness of the arguments. See In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); 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).

The Examiner contends [answer, page 3] that "[o]ne ... would have been motivated to substitute one light modulating means in Garcia for each light element of Ciongoli to obtain a more realistic image." Furthermore, the Examiner employs Bassett [answer, pages 3 to 4] to show that "a large number of fiber optics could transmit a 2-D image." Appellant argues [brief, pages 15 to 17] that the Examiner has failed to establish a prima facie case, that there is no suggestion to combine, and that the proposed combination fails to yield the claimed invention.

We are convinced by the Appellant's arguments. The Examiner has not tackled the main problem in Ciongoli, i.e., as claimed, the collimating means are used to create an image instead of the focussing lens 15 in Ciongoli. It is true that

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Garcia does show a collimating lens 23, however, the Examiner has not shown how such a collimating lens of Garcia can be used in Ciongoli, or why an artisan would use it to replace lens 15 of Ciongoli. The additional use of Bassett does not add any thing to cure the deficiency of Ciongoli. Therefore, we do not sustain the obviousness rejection of claims 5 to 9 over Ciongoli in view of Garcia and Bassett.

In conclusion, we reverse the Examiner's final rejection of claim 3 to 9 under 35 U.S.C. § 112, first paragraph. We also reverse the final rejection under 35 U.S.C. § 112, second paragraph with respect to claim 9, but affirm with respect to claims 3 and 4. We also reverse the final rejection of claims 5 to 9 under 35 U.S.C. § 102 over Ciongoli. Furthermore, we reverse the obviousness rejection under 35 U.S.C. § 103 of claim claims 5 to 9 over Ciongoli, Garcia and Bassett. Also, we have pro forma reversed the rejection of the Examiner under 35 U.S.C. § 102 as well as under § 103 as to claims 3 and 4.

NEW GROUND OF REJECTION UNDER 37 CFR § 1.196(b)

We make the following new grounds of rejection.

Claims 3 and 4 are rejected under 35 U.S.C. § 112, first paragraph for lack of adequate written description. Each of

these claims covers the elements from two embodiments [brief, pages 19 to 20] in a single claim. However, such a composite embodiment is neither shown in a figure nor described in the original disclosure. The disclosure [page 5, lines 5 to 8] only briefly mentions the two separate possible embodiments. But, it is not disclosed how a composite embodiment composed of the two separate possible embodiments would operate, or what arrangement of various elements would comprise it.

Claim 9 is rejected under 35 U.S.C. § 102/103 over Garcia. Garcia shows a plurality of pixels, 1, 5 and 9. Collimating lens 23 collimates the light beam. The scanner 25 receives the collimated beam and rasterizes the viewing space with the collimated beam as the scanner 25 reflects (or steers) the collimated beam onto display screen 29, [column 3, lines 40 to 46]. We must point out that one might misread Garcia by looking at column 2, lines 37 to 41 where the term "focused" is used to form an image on the scanner 25. However, clearly, the collimating lens 23 is used to collimate the beam, not "focus" it, and the collimated image is received by the scanner 25. This is verified at column 3, lines 40 to

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46 of Garcia, as noted above.

The Examiner's decision is affirmed-in-part. New grounds of rejection, in accordance with 37 CFR 1.196(b) are entered.

In addition to affirming the Examiner's rejection of one or more claims, this decision contains new grounds of rejection pursuant to 37 CFR § 1.196(b)(amended effective Dec. 1, 1997, by final rule notice, 62 Fed. Reg. 53,131, 53,197 (Oct. 10, 1997), 1203 Off. Gaz. Pat. & Trademark Office 63, 122 (Oct. 21, 1997)). 37 CFR § 1.196(b) provides, "A new ground of rejection shall not be considered final for purposes of judicial review."

Regarding any affirmed rejection, 37 CFR § 1.197(b) provides:

(b) Appellant may file a single request for rehearing within two months from the date of the original decision

37 CFR § 1.196(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 proceedings (37

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CFR § 1.197(c)) as to the rejected claims:

(1) Submit an appropriate amendment of the claims so rejected or a showing of facts relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the application will be remanded to the examiner. . . .

(2) Request that the application be reheard under § 1.197(b) by the Board of Patent Appeals and Interferences upon the same record. . . .

Should Appellant elect to prosecute further before the Primary Examiner pursuant to 37 CFR § 1.196(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 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 reconsideration thereof.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR

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§ 1.136(a).

AFFIRMED-IN-PART, 37 CFR § 1.196(b)

	JAMES D. THOMAS)	
	Administrative Patent Judge)	
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	KENNETH W. HAIRSTON)	BOARD OF
PATENT	Administrative Patent Judge)	APPEALS AND
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