

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(2) is not binding precedent of the Board.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. 21

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JERRY D. CRIPE, GERARD T. REED and JAMES C. KOONTZ

Appeal No. 96-3512
Application 08/235,623¹

ON BRIEF

Before COHEN, MEISTER, FRANKFORT, **Administrative Patent Judges**.
MEISTER, **Administrative Patent Judge**.

DECISION ON APPEAL

Jerry D. Cripe, Gerard T. Reed and James C. Koontz (the appellants) appeal from the final rejection of claims 1-20, the only claims present in the application.

WE REVERSE.

¹Application for patent filed April 29, 1994.

Appeal No. 96-3512
Application 08/235,623

The appellants invention pertains to a method of and apparatus for decomposition of a chemical compound. Independent claims 1 and 10 are further illustrative of the appealed subject matter and copies thereof may be found in the appendix to the appellants' brief.

The references relied on by the examiner are:

Kaartinen	3,979,503	Sep. 07, 1976
Yamazaki et al. (Yamazaki)	5,230,931	Jul. 27, 1993
Lau et al. (Lau)	5,290,392	Mar. 01, 1994
Deaton et al. (Deaton)	5,322,567	Jun. 21, 1994

(Filed Oct. 24, 1991)

Claims 1-20 stand rejected under 35 U.S.C. § 112, first paragraph.

Claims 1-20 stand rejected under 35 U.S.C. § 112, second paragraph.

Claims 1, 3, 4, 6, 8 and 9 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Kaartinen.

Claims 1-6, 9-15 and 18-20 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Lau.

Claims 1-7, 9-16 and 18-20 stand rejected under 35 U.S.C. § 103 as being unpatentable over Lau in view of Yamazaki.

Claims 8 and 17 stand rejected under 35 U.S.C. § 103 as being unpatentable over Lau in view of Yamazaki and Deaton.

The examiner's rejections are explained on pages 2-5 of the

Appeal No. 96-3512
Application 08/235,623

answer. The arguments of the appellants and examiner in support of their respective positions may be found on pages 4-9 of the amended brief and pages 6 and 7 of the answer.

OPINION

As a preliminary matter, we base our understanding of the appealed subject matter upon the following interpretation of the terminology in the claims. In line 2 of claim 2, line 2 of claim 8, line 3 of claim 11 and line 3 of claim 17, we interpret "circular" to be -- circular in cross-section --.

Considering first the rejection of claims 1-20 under 35 U.S.C. § 112, first paragraph, the examiner is of the opinion that there is no descriptive support in the original disclosure for the limitation that the "member" is self-supported on or against the wall of the reaction chamber "without other means of support" as set forth in independent claims 1, 10 and 19. In support of this position the examiner references lines 1-3 of page 9 of the specification and urges that "the drawings are not refined enough for full reliance thereupon" (see answer, page 6).

We do not agree with the examiner's position. The description requirement found in the first paragraph of 35 U.S.C. 112 is separate from the enablement requirement of that

Appeal No. 96-3512
Application 08/235,623

provision. **See Vas-Cath Inc. v. Mahurkar**, 935 F.2d 1555, 1561-63, 19 USPQ2d 1111, 1115-17 (Fed. Cir. 1991) and **In re Barker**, 559 F.2d 588, 591, 194 USPQ 470, 472 (CCPA 1977), **cert. denied**, 434 U.S. 1064, 197 USPQ 271 (1978). Moreover, as the court stated in **In re Kaslow**, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983):

The test for determining compliance with the written description requirement is whether the disclosure of the application as originally filed reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter, rather than the presence or absence of literal support in the specification for the claimed language. The content of the drawings may also be considered in determining compliance with the written description requirement. (citations omitted)

Although the claimed invention does not necessarily have to be expressed in **ipsis verbis** in order to satisfy the description requirement (**see In re Wertheim**, 541 F.2d 257, 265, 191 USPQ 90, 98 (CCPA 1976)), it is nonetheless necessary that the disclosed apparatus inherently perform the functions now claimed (**see In re Smythe**, 480 F.2d 1376, 1383, 178 USPQ 279, 284 (CCPA 1973)). Precisely how close the original description must come to comply with the description requirement must be determined on a case-by-case basis. The primary consideration is factual and depends on

Appeal No. 96-3512
Application 08/235,623

the nature of the invention and the amount of knowledge imparted to those skilled in the art by the disclosure. **See *Vas-Cath Inc. v. Mahurkar, supra.***

The examiner is correct in noting that lines 1-3 of page 9 of the specification refer to the member 30 as being positioned on support structure 35. We must point out, however, that this description is with reference to the embodiment of Fig. 1. On page 20 of the specification it is clearly set forth, with respect to the embodiment of Figs. 8 and 9, that the member 30 is "self supported in reaction chamber 20," with the support member being of "square shape" and the reaction chamber being of "circular shape" (i.e., circular in cross-section). Viewing Figs. 8 and 9, these figures, although rudimentary in nature, nevertheless clearly depict the square-shaped member being supported by its four corners on the wall of the reaction chamber 20 (which is illustrated in Fig. 9 as having a circular cross-section). Taking the appellants' description on page 20 of the specification, in conjunction with Figs. 8 and 9 of the drawings, we believe the appellants' disclosure taken as a whole reasonably conveys to one of ordinary skill in the art that the "member" is self-supported on or against the wall of the reaction chamber "without other means of support" as claimed. This being the

Appeal No. 96-3512
Application 08/235,623

case, we will not sustain the rejection of claims 1-20 under 35 U.S.C. § 112, first paragraph.

Turning to the rejection of claims 1-20 under 35 U.S.C. § 112, second paragraph, the examiner is of the opinion that the claimed terminology of "major face" and "an energy" (independent claims 1, 10 and 19) and "substantially near" (claim 20) is unclear. We will not support the examiner's position. The purpose of the second paragraph of § 112 is to basically ensure, with a **reasonable** degree of particularity, an **adequate** notification of the metes and bounds of what is being claimed. **See In re Hammack**, 427 F.2d 1378, 1382, 166 USPQ 204, 208 (CCPA 1970). Moreover, as the court stated in **In re Moore**, 439 F.2d 1232, 1235, 169 USPQ 236, 238 (CCPA 1971), the determination of whether the claims of an application satisfy the requirements of the second paragraph of § 112 is

merely to determine whether the claims do, in fact, set out and circumscribe a particular area with a **reasonable** degree of precision and particularity. It is here where the definiteness of language employed 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 by one possessing the ordinary level of skill in the pertinent art. [Emphasis ours; footnote omitted.]

Noting that the member 30 is depicted in Figs. 8 and 9 as

Appeal No. 96-3512
Application 08/235,623

being a relatively thin plate-like member of generally square shape, we do not believe that it can seriously be contended that the artisan would not understand that the upper and lower faces (i.e., the faces of by far the greatest surface area) of the plate-like member were the "major" faces. Note also the description in lines 27 and 28 on page 11 to the effect that "member 30 is shaped in a plate configuration having two major surfaces as shown in FIG. 1."

As to the examiner's criticism of the recitation "an energy" we do not believe that one of ordinary skill in this art would not understand that this reference referred to the energy created by the recited "energy source." As to the examiner's criticism of the recitation "substantially near" in claim 20, page 13 of the appellants' specification states that:

To obtain optimum destruction of chemical compound 70, exit end 44 is positioned as close as possible to the member 30. This position is not necessarily preferred because it is desirable to have a non-restrictive flow of chemical compound where chemical compound 70 does not backflow into processing tool 82. A minimum distance 73 between exit end 44 of conduit 40 and the major surface of member 30 towards which chemical 70 is introduced is preferably the distance where the flow rate of chemical compound is not altered [Lines 3-12.]

Consistent with the appellants' specification, one of ordinary skill in the art would understand that "substantially near" the

Appeal No. 96-3512
Application 08/235,623

major face of the member referred to a distance that was within the minimum distance as set forth in the above-noted description.

In view of the foregoing, we will not sustain the rejection of claims 1-20 under 35 U.S.C. § 112, second paragraph.

Considering next the rejection of claims 1, 3, 4, 6, 8 and 9 under 35 U.S.C. § 102(b) as being anticipated by Kaartinen, the examiner is of the opinion that:

The reference shows in Fig. 2 and col. 6 lines 20-60 a device having an inlet, a mesh surface immediately above and perpendicular thereto (off which the gases may bounce back to the inlet after contacting it) and electrical conductors for heating it, all inside a tapered reactor whose outlet is smaller than the inlet. This meets the required elements. [Answer, pages 3 and 4.]

From the above, it appears that the examiner considers the mesh basket 10 to correspond to the claimed "member." We must point out, however, that the claims require this member to be self-supported either on or against the wall of the reaction chamber. Contrary to the claimed arrangement, the mesh basket 10 is supported from mounting plate 13 by conductors 11, 12. Accordingly, we will not sustain the rejection of claims 1, 3, 4, 6, 8 and 9 under 35 U.S.C. § 102(b) as being anticipated by Kaartinen.

Turning now to the rejection of claims 1-6, 9-15 and 18-20 under 35 U.S.C. § 102(b) as being anticipated by Lau, the

Appeal No. 96-3512
Application 08/235,623

examiner states that Lau teaches "a cylindrical reactor with 3 orifices above one of which sits self-supported a rectangular substrate" (answer, page 4). Apparently the examiner is referring to substrate 20; however, this element is not "self-supported" as asserted by the examiner, much less self-supported either on or against the wall of the reaction chamber as required by the claims on appeal. Instead substrate 20 is supported by substrate holder 18 which in turn is supported by thermocouple 16 which in turn is supported by platform 14 (see Fig. 1). This being the case, we will not sustain the rejection of claims 1-6, 9-15 and 18-20 under 35 U.S.C. § 102(b) as being anticipated by Lau.

We consider last the rejections under 35 U.S.C. § 103 of (1) claims 1-7, 9-16 and 18-20 based on the combined disclosures of Lau and Yamazaki and (2) claims 8 and 17 based on the combined disclosures of Lau, Yamazaki and Deaton. Both of these rejections are bottomed on the examiner's view that it would have been obvious to provide the substrate of Lau with one which was made of SiO₂ in view of the teachings of Yamazaki (see the paragraph bridging pages 4 and 5 of the answer). However, such a modification of Lau in view of the teachings of Yamazaki does nothing to overcome the basic deficiency of Lau that we have

Appeal No. 96-3512
Application 08/235,623

noted above with respect to the § 102 rejection based on this reference, namely, that there is no teaching in Lau of a "member" that is self-supported either on or against the wall of the reaction chamber required by the claims on appeal.

The answer also states that:

To the extent that Lau does not teach a non-supported member, it would have been obvious to one of ordinary skill in the art at the time the invention was made to exclude the supports, with attendant loss of function, as a design expedient or to prevent deposition on these surfaces and waste of reactants. [Page 5.]

We observe, however, obviousness under § 103 is a legal conclusion based on **factual evidence** (*In re Fine*, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988)) and the examiner may not resort to speculation, or hindsight reconstruction to supply deficiencies in the factual basis (*In re GPAC Inc*, 57 F.3d 1573, 1582, 35 USPQ2d 1116, 1123 (Fed. Cir. 1995) and *In re Warner*, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967), **cert. denied**, 389 U.S. 1057 (1968)). Accordingly, the subjective opinion of the examiner that the supports of Lau may be eliminated, without evidence in support thereof, is not a basis upon which the legal conclusion of obviousness may be reached. This is particularly the case since the specification states that the "advantages of this self supporting scheme are its simplicity, reduced cost, and

Appeal No. 96-3512
Application 08/235,623

reduced maintenance." In light of these stated advantages, the provision of the "member" being self-supported on or against the wall of the reaction chamber cannot simply be dismissed as a "design expedient" as the examiner purposes.

With respect to claims 8 and 17, we have carefully reviewed the teachings of Deaton but find nothing therein which would overcome the basic deficiencies of Lau that we have noted above.

Therefore, we will not sustain the rejections under 35 U.S.C. § 103 of (1) claims 1-7, 9-16 and 18-20 based on the combined disclosures of Lau and Yamazaki and (2) claims 8 and 17 based on the combined disclosures of Lau, Yamazaki and Deaton.

In summary, all of the above-noted rejections are reversed.

REVERSED

IRWIN CHARLES COHEN)	
Administrative Patent Judge)	
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JAMES M. MEISTER)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
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Appeal No. 96-3512
Application 08/235,623

CHARLES E. FRANKFORT)
Administrative Patent Judge)

Appeal No. 96-3512
Application 08/235,623

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