

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. 48

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* ICHIRO TSUCHIYA, KOHEI KOBAYASHI, HIROAKI OHTA, KAZUYA  
KUWAHARA, KATSUYUKI TSUNEISHI, HIDEO MIYAKI, and YASUO MATSUDA

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Appeal No. 2001-2186  
Application No. 08/674,865

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HEARD: October 9, 2002

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Before KIMLIN, OWENS, and TIMM, *Administrative Patent Judges*.  
TIMM, *Administrative Patent Judge*.

***DECISION ON APPEAL***

Appellants appeal the Examiner's rejection of claims 14, 16, and 19-24. We have jurisdiction under 35 U.S.C. § 134. Claims 6 and 11-13, the only other pending claims, have been withdrawn from consideration pursuant to a restriction/election requirement.

***BACKGROUND***

Appellants' invention relates to an optical fiber drawing furnace. Claims 14 and 24 are illustrative:

14. An optical fiber drawing furnace comprising:

a muffle tube, into which an optical fiber preform is supplied;

a cylindrical heater surrounding the muffle tube;

a pair of support column portions which rise from the upper end of said heater at circumferential positions substantially equidistantly spaced from one another;

four electrode connecting terminals and no more than four, two electrode connecting terminals extending perpendicularly from each of said support column portions and connecting to one another via a connecting element, the four electrode connecting terminals being arranged so that the angle between the adjacent terminals substantially equals 90°;

an electric power source connected, via electrodes, to the four electrode connecting terminals; and

two extension portions protruding upwardly from the heater to balance heat supplied by the pair of support column portions, and being disposed substantially equidistantly between said support column portions.

24. An optical drawing furnace as claimed in claim 14, wherein each of the four electrode connecting terminals are disposed substantially equidistantly between one of the support column portions and one of the extension portions.

The prior art references of record relied upon by the Examiner in rejecting the appealed claims are:

Wilsey 4,755,658 Jul. 5, 1988

Fujimaki et al. (Fujimaki)  
(pub. Japanese Patent Application)

6-227837

Aug. 16, 1994

Claims 14, 16, and 19-23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Fujimaki in view of Wilsey. Claim 24 stands rejected for lack of compliance with the

written description requirement of 35 U.S.C. § 112, first paragraph. We reverse with respect to both rejections.

### ***OPINION***

#### ***Obviousness***

All the claims are dependent on claim 14 and thus require that the furnace include four electrode connecting terminals arranged so that the angle between the adjacent terminals substantially equals 90° (Claim 14). The Examiner finds that Wilsey describes electrode connecting terminals in the claimed arrangement (Answer at 5). However, we agree with Appellants that the Examiner's finding is based on an incorrect interpretation of the claim language (Brief at 20-21).

“When examining claims for patentability, claims are interpreted as broadly as is reasonable and consistent with the specification.” *In re Thrift*, 298 F.3d 1357, 1364, 63 USPQ2d 2002, 2006 (Fed. Cir. 2002). The key words here are “reasonable” and “consistent.” The Examiner's interpretation is not reasonable as it completely eliminates the limitation introduced by the language “the angle between the adjacent terminals substantially equals 90°.” Every limitation in the claims must be given effect rather than considering one in isolation from the others. *In re Geerdes*, 491 F.2d 1260, 1262-63, 180 USPQ 789, 791 (CCPA 1974). Nor is the Examiner's interpretation “consistent with the specification.”

The specification indicates that the “the angle” referenced in claim 14 is the angle created by placing the terminals around the circumference of the heating portion 21, i.e., the angle between two lines extending from adjacent terminals to the center point of the circle (Fig. 2, reference numbers 22, 23, 24, 25). The specification distinguishes the location of the terminals from the prior art by noting that Appellants’ terminals are arranged at equal intervals along the circumferential direction of the heating portion 21 whereas the prior art terminals are arranged at an angle of  $180^\circ$  in the circumferential direction of the heating portion (specification at 19, ll. 1-10 in combination with 15, ll. 11-20 and 4, ll. 19-24; also compare Fig. 2 at 22, 23, 24, 25 with Fig. 9 at 106, 107). The equal intervals described and depicted in the specification are equivalent to an angle of  $90^\circ$  as measured from the center point of the circle. Reading the claim consistently with the specification requires that the terminals be placed substantially in the described and depicted equidistant arrangement.

The Examiner relies on Wilsey as evidence that the terminal arrangement required by the claims was known in the prior art. Wilsey does not have electrode connecting terminals arranged as claimed. In Wilsey, pairs of terminals are arranged substantially  $180^\circ$  from each other. As discussed above, the claims require a  $90^\circ$  spacing in relation to the circumference of the cylindrical heater.

The Examiner has not established that each and every limitation of the claim is described or suggested by the combination of prior art references or would have been obvious based on the knowledge of those of ordinary skill in the art and, thus, the Examiner has failed to establish a

*prima facie* case of obviousness with respect to the subject matter of claims 14, 16, and 19-23.

*See In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

***Written Description***

The Examiner has rejected claim 24 as failing to meet the written description requirement of 35 U.S.C. § 112, first paragraph. The Examiner's rejection rests on the basis that there is no support for disposing the electrode connecting terminals substantially equidistantly between one of the support column portions and one of the extension portions as claimed (Answer at 4).

The specification does not use the words "substantially equidistantly between one of the support column portions and one of the extension portions" to describe the location of the terminals. As the specification does not use the same terminology as the claims, the question to be answered is whether the concept of equidistance is conveyed by the original disclosure. *See In re Anderson*, 471 F.2d 1237, 1244, 176 USPQ 331, 336 (CCPA 1973). This concept is conveyed by Figures 1-3 and the specification at pages 15-19. The symmetrical arrangement of the terminals (Fig. 2), support column portions (specification at 15, ll. 11-15; Fig. 3) and extensions (specification at 20, ll. 9-11; Fig. 3) and the symmetric nature of the branching current paths (specification at 17, l. 16 to 18, l. 10) together convey the claimed equidistant nature of the terminal position.

The subject matter of claim 24 is adequately supported by the original disclosure in a manner meeting the requirements of 35 U.S.C. § 112, first paragraph.

**CONCLUSION**

To summarize, the decision of the Examiner to reject claims 14, 16, and 19-23 under 35 U.S.C. § 103 and claim 24 under 35 U.S.C. § 112, first paragraph is reversed.

**REVERSED**

EDWARD C. KIMLIN	)	
Administrative Patent Judge	)	
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	)	
	)	BOARD OF PATENT
TERRY J. OWENS	)	APPEALS
Administrative Patent Judge	)	AND
	)	INTERFERENCES
	)	
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	)	
CATHERINE TIMM	)	
Administrative Patent Judge	)	

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APPEAL NO. 2001-2186 - JUDGE TIMM  
APPLICATION NO. 08/674,865

APJ TIMM

APJ KIMLIN

APJ OWENS

DECISION: **REVERSED**

Prepared By: TINA D. LEE

**DRAFT TYPED:** 15 Aug 03

**FINAL TYPED:**