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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte PAUL L. FALKENSTEIN and BRIAN JUSTUS

Appeal 2010-008495
Application 11/689,584
Technology Center 2800

Before SCOTT R. BOALICK, JAMES B. ARPIN, and
TRENTON A. WARD, *Administrative Patent Judges*.

WARD, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1-3. We have jurisdiction under 35 U.S.C. § 6(b). We reverse.

STATEMENT OF CASE¹

Appellants' claimed invention relates to fused array preform fabrication of holey optical fibers. *See* Spec. 1:5. Claim 1 is illustrative with certain limitations emphasized:

1. A holey fiber with an outside diameter from approximately 20 microns to 5 millimeters, said holey fiber comprising:

a core; and

a plurality of longitudinal channels disposed surrounding said core,

wherein the longitudinal channels include diameters of approximately .1 micron to 100 microns; and

wherein a *center-to-center distance between two adjacent longitudinal channels of said plurality of longitudinal channels varies less than 2% along the length of the channels.*

REFERENCES

The Examiner relies on the following prior art:

Broderick US 2003/0161599 A1 Aug. 28, 2003

REJECTIONS

(1) Claim 1 stands rejected under 35 U.S.C. § 102(e) as being anticipated by Broderick.

(2) Claims 2 and 3 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Broderick.

¹ Our decision will make reference to Appellants' Appeal Brief ("App. Br.," filed Jun. 23, 2009) and the Examiner's Answer ("Ans.," mailed Nov. 10, 2009).

ANTICIPATION REJECTION

The Examiner finds that Broderick discloses each and every element of independent claim 1, including a center-to-center distance that varies less than 2% along the length of the longitudinal channels of the holey fiber.

Ans. 3-4.

Appellants argue that Broderick does not disclose a center-to-center distance that varies less than 2% along the length of the longitudinal channels. App. Br. 3. Appellants argue that Broderick contains no express disclosure of variability, nor is there any evidence of an inherent disclosure. App. Br. 4. Specifically, Appellants argue that Broderick is silent as to the variations in the center-to-center distances of the longitudinal channels, yet the Examiner has “interpreted the lack of teaching of the variation as a teaching that the variation is 0%.” App. Br. 3.

ISSUE

Has the Examiner erred in rejecting claim 1 by finding that Broderick discloses a center-to-center distance that varies less than 2% along the length of the longitudinal channels of the holey fiber?

ANALYSIS

According to Appellants, Broderick fails to disclose a center-to-center distance that varies less than 2% along the length of the longitudinal channels of the holey fiber. App. Br. 3-4. The Examiner finds, however, that Broderick discloses longitudinal channels with center-to-center distance described as a “pitch” Λ . Ans. 3 (citing Broderick ¶ 102). Furthermore, the Examiner finds that, “[s]ince the reference to Broderick teaches the center-

to-center distance (to be a set value Λ) and does not teach any variation in the center-to-center distance in the fiber (*i.e.* 0% variation), the prior art reference to Broderick anticipates.” Ans. 3 (emphasis added). Specifically, the Examiner finds that, because Broderick is “silent as to variation change” in the center-to-center distance along the length of the longitudinal channels, Broderick teaches “0% variation” in the center-to-center distance. Ans. 3, 7.

Appellants argue that lack of any disclosure in Broderick regarding variation in center-to-center distances does not amount to an inherent teaching of 0% variation. App. Br. 3. We are persuaded by Appellants’ arguments.

To establish inherency, the extrinsic evidence “must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.” *Cont’l Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1268 (Fed. Cir. 1991). Broderick’s failure to provide any disclosure regarding center-to-center distance variation cannot fairly be read as a teaching of 0% center-to-center distance variation.

In fact, as argued by Appellants (App. Br. 3), Broderick discloses that the holes in its cladding provide an “*average* inter-hole spacing.” Broderick, ¶ 86 (emphasis added). Additionally, as Appellants point out (App. Br. 3), Broderick states that the “cladding contains a number of *approximately* regularly spaced holes distributed across the holes to define a pitch.” Broderick, ¶ 102 (emphasis added). Therefore, Broderick suggests that the variation in center-to-center distance is not 0%.

Appellants further argue that Broderick does not teach 0% variation because “no man-made object could be made with 0% variability.” App. Br.

3. “The [E]xaminer understands and agrees that no man made object may be constructed with 0% variability.” Ans. 7. Thus, the Examiner arbitrarily assigns a small tolerance to Broderick of $\pm 5\%$, but finds that “somewhere along [the holey fiber’s] length the holes will have a spacing of less [than] 2% as indicated by the claim language.” Ans. 7. Accordingly, the Examiner construes Appellants’ claim 1 to require that the variation in center-to-center distance be less than 2% *anywhere* along the length of the channels. On the record before us, we find that the Examiner’s reasoning is inconsistent with a proper construction of claim 1.

We disagree with the Examiner’s finding that the claim limitation “varies less than 2% along the length of the channels” can be met by channels having a center-to-center distance of less than 2% *anywhere* along the length of the channel. Ans. 7. During examination of a patent application, pending claims are given their broadest reasonable construction consistent with the Specification. *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). We construe the claim limitation “varies less than 2% along the length of the channels” in accordance with its plain and ordinary meaning to mean that the center-to-center distance varies by no more than 2%, i.e., by less than, but not equal to, 2%, along the length of the channels. In construing the claims, we also are guided by Appellants’ Specification. *See In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997) (“[The USPTO] applies to the verbiage of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in the applicant’s specification.”).

Appellants describe holey fibers “having a *periodic and highly uniform channel arrangement* along the length of the fiber” and a “*uniform undistorted pitch or center-to-center distance* between the channels.” Spec. 8:18-19; 13:20-21 (emphases added). Additionally, Appellants state that “[t]he channels have a high degree of uniformity of channel arrangement wherein center-to-center distances vary less than about a couple percent, such as 2%.” Spec. 18:7-8. Thus, Appellants’ Specification supports the construction of the disputed claim limitation to mean that the center-to-center distance varies by no more than 2% along the *entire* length of the channels, rather than by less than 2% *anywhere* along the length of the channels. This construction is consistent with Appellants’ stated goal of channel uniformity. To the extent that the Examiner assigns a variation of $\pm 5\%$ to Broderick (Ans. 7), Broderick fails to disclose the less than 2% variation required by claim 1. Therefore, we do not sustain the anticipation rejection of claim 1.

OBVIOUSNESS REJECTION

The Examiner rejects dependent claims 2 and 3 under § 103(a) as unpatentable over Broderick. Since the Examiner’s obviousness rejections do not address the deficiencies of Broderick noted above regarding independent claim 1, we do not sustain the obviousness rejection of claims 2 and 3 for similar reasons.

CONCLUSION

The Examiner erred in rejecting claim 1 under § 102 and claims 2 and 3 under § 103.

Appeal 2010-008495
Application 11/689,584

ORDER

The Examiner's decision rejecting claims 1-3 is reversed.

REVERSED

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