This opinion is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CORNING INCORPORATED

Appeal 2007-1939
Application 10/277,563
Technology Center 1700

Decided: June 13, 2007

Before JAMESON LEE, RICHARD TORCZON, and SALLY G. LANE, *Administrative Patent Judges*.

TORCZON, *Administrative Patent Judge*.

DECISION ON APPEAL

The claimed invention generally relates to a solid-oxide fuel cell (SOFC). The examiner contends claims 12 and 34-39 have been anticipated under 35 U.S.C. § 102(b). The appellant (Corning) disagrees. We affirm.

The claims

Claim 12, the only independent claim on appeal, defines the invention as follows:[1]

> 12. An electrical power-generating assembly for a solid oxide fuel cell comprising:
>
> a) a packet element having an enclosed interior formed at least in part by one or more compliant solid oxide sheet sections;
>
> b) a frame element edge-supporting the solid oxide sheet sections;
>
> c) one or a plurality of anodes disposed within the enclosed interior and supported on an interior surface of a compliant solid oxide sheet section;
>
> d) one or a plurality of cathodes supported on an exterior surface of the compliant solid oxide sheet section at locations generally opposite the anodes on the interior surface;
>
> e) a fuel delivery conduit through the frame element for supplying a fuel gas to the enclosed interior; and
>
> f) electrically conductive means connected to the anodes and cathodes for drawing electrical current from the assembly.

Corning does not separately argue the limitations of the dependent claims so we focus our analysis on claim 12.

We start by construing claim 12. Corning describes the claimed invention in terms of embodiments in the specification, but offers no express construction of a contested term.[2] The final rejection does not offer express claim constructions either, but the examiner's answer does.

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[1] All claim language is taken from Corning's Appeal Brief (Br.).

[2] Compare Br. 2-4 (Summary of the Claimed Subject Matter) (describing claim 12 in terms of disclosed embodiments) with Br. 4-5 (Argument) (noting differences between the claimed embodiment and the prior art). For

The examiner expressly construes[3] the terms *packet element*, *frame element edge*, *fuel delivery conduit*, and e*lectrically conductive means*. The examiner construes—

packet element to require a solid oxide sheet defining (at least in part) an enclosed interior. An anode must be disposed on the interior surface of the sheet, while a cathode is disposed on the exterior generally opposite the anode.

frame element edge to require a support for a solid-oxide sheet. The frame can be anywhere (e.g., inside or outside the sheet) as long as it supports an edge, and can have any shape including tubular.

fuel delivery conduit to include a conduit lying within a tubular frame.

electrically conductive means to correspond to the structures Corning describes in its specification,[4] which include the frame or other conductors.

The examiner noted in his answer that during examination claims must be construed as broadly as is reasonable in light of the specification[5] but that claims are not normally limited to an embodiment.[6] Since Corning

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instance, if Corning has acted as its own lexicographer to define a term narrowly, this fact has not been developed on appeal. *See Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1343, 60 USPQ2d 1851, 1855 (Fed. Cir. 2001) (requiring specific argument and record citation in support claim construction).

[3] Examiner's Answer (Ans.) 4-6.

[4] Specification (Spec.) ¶¶0126-0129.

[5] Ans. 3-4; *In re Bigio*, 381 F.3d 1320, 1324, 72 USPQ2d 1209, 1210-11 (Fed. Cir. 2004).

[6] Ans. 5; *In re Morris*, 127 F.3d 1048, 1057, 44 USPQ2d 1023, 1030 (Fed. Cir. 1997) (explaining that an applicant seeking a narrower construction

filed no reply responding to the examiner's construction, we limit ourselves to reviewing the reasonableness of these constructions.

The construction of *packet element* and of *fuel delivery conduit* simply summarizes the claim language. The examiner oversimplifies the construction of *frame element edge*, however. The claim limitation is "a frame element edge-supporting the solid oxide sheet sections". Thus, it is not an *edge*, but rather a *frame that supports an edge* that must be present in the prior art. This construction misstep is harmless in view of the way the examiner actually applies the art. Finally, the *electrically conductive means* limitation is presumed to be a means-plus-function limitation,[7] which requires resort to the specification for a determination of corresponding structure and equivalents.[8] Corning points to certain paragraphs in the specification in support of this limitation.[9] Of particular relevance in this case is the disclosure that the conductors could be "wire, ribbon, felt or mesh".[10]

Ketcham's disclosure

The examiner relies on a patent[11] (Ketcham) as evidence of anticipation. The Ketcham patent has the same assignee as, and two

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must either show why the broader construction is unreasonable or amend the claim to state expressly the scope intended).

[7] *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1362, 72 USPQ2d 1344, 1351 (Fed. Cir. 2004) (explaining that the court has "seldom held" the presumption to have been overcome).

[8] 35 U.S.C. § 112.

[9] Br. 3.

[10] Spec. ¶0128.

[11] T.D. Ketcham, W.R. Powell, R.L. Stewart, and Dell J. St. Julien, "Flexible inorganic electrolyte fuel cell design", U.S. Patent 6,045,935 (granted 4 April 2000). Ketcham and St. Julien are the common inventors.

inventors in common with, the application on appeal. Ketcham teaches inorganic-electrolyte fuel cells for generating electrical power, particularly for vehicles.[12] The fuel cell has an oxidant reservoir, a fuel reservoir, and an electrolyte structure between the reservoirs in the form of a non-planar sheet.[13]

The examiner applies the disclosure to claim 12 with reference to Ketcham's Figures **2** and **3**.[14] Figure **3** shows an assembly with a compliant solid-oxide sheet **63** sandwiched between facing electrodes **62**, **64**.[15] The claims require the anode to be "interior" and the cathode to be "exterior". "Interior" and "exterior" are relative terms requiring some frame of reference. The examiner notes that the metal interconnect plates **74** on either side of the sandwich can be seen as defining enclosed spaces. Thus, either electrode could be defined as "interior" or "exterior", depending on which enclosed space is chosen as the point of reference.[16] Either way, the solid-oxide sheet **63** would form one wall of the enclosed space, thus defining a packet element.

The examiner points to Ketcham's ceramic tube **38** as the frame that supports an edge of the solid-oxide sheet **63** via baffle rings **40**. It is not clear whether the baffle rings **40** are involved in supporting the solid-oxide sheet **63**, but either directly or indirectly Ketcham's ceramic tube **38** appears

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[12] Ketcham at 2:53-55.
[13] Ketcham at 1:63-67.
[14] Ans. 4-6.
[15] Ketcham at 6:17-22.
[16] For instance, in the case of a door between adjoining rooms, both faces may be described as "interior" with respect to the building. From the perspective of each of the adjoining rooms, however, only the face in that room is "interior".

to support the internal edge of the disc-shaped solid-oxide sheet **63**. For the fuel delivery conduit through the frame element, the examiner notes the perforated metal manifold tubes **35**, **36** in the perforated ceramic tube **38**.[17]

The examiner points to the compliant/flexible current leads **32**, **34**[18] as meeting the requirement for electrical conductors connected to the electrodes. The leads are described as felt, wool, or fibrous mats.[19] Figure 3 shows the lead **32** and lead **34** indirect contact with the anode **62** and cathode **64**, respectively.

Corning argues that Ketcham fails to show specific claim elements or anything analogous, but did not provide its own specific claim construction or file a reply specifically addressing the examiner's claim construction. Differences certainly exist between what Ketcham disclosed and what Corning is now disclosing, but we must focus on the actual language of claim 12.[20] Corning's insistence that its invention and Ketcham's previously disclosed invention are different is not evidence that would support a reversal.[21]

HOLDING

Except as noted above, the examiner's reading of claim 12 is reasonable. The noted exception is harmless in view of the way the examiner actually applies the reference to the claim. Corning has given no

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[17] Ketcham at 5:55-60.
[18] Ketcham at 5:51-55.
[19] Ketcham at 6:9; cf. Spec. ¶0128 ("wire, ribbon, felt, or mesh").
[20] *Morris*, 127 F.3d at 1056-57, 44 USPQ2d at 1030.
[21] *Cf. Biotec Biologische Naturverpackungen v. Biocorp., Inc.*, 249 F.3d 1341, 1353, 58 USPQ2d 1737, 1745 (Fed. Cir. 2001) (noting conclusory statements do not raise genuine issues of fact).

specific basis for reversing the examiner's construction. Thus construed, claim 12 is broad enough to include subject matter previously disclosed in the Ketcham patent. Consequently, the rejection of claim 12, and of the remaining claims which were not separately argued, must be—

AFFIRMED

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