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15/243,249	08/22/2016	Gary D. Roberge	94450US01; 67097-3436PUS1	4533

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EXAMINER	
RUPPERT, ERIC S	

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte GARY D. ROBERGE

Appeal 2019-002564
Application 15/243,249
Technology Center 3700

Before STEFAN STAICOVICI, BRETT C. MARTIN, and WILLIAM A. CAPP, *Administrative Patent Judges.*

MARTIN, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant,[1] United Technologies Corporation, appeals from the Examiner's decision to reject claims 1, 4–16, and 24, the only claims currently pending in the application. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

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[1] We use the word "Appellant" to refer to "applicant" as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as United Technologies Corp. Appeal Br. 1.

CLAIMED SUBJECT MATTER

The claims are directed "to heat exchangers for use in aircraft, and more specifically to an aircraft heat exchanger constructed at least partially of stacked panels." Spec. ¶ 1. Claim 1, reproduced below, is illustrative of the claimed subject matter:

> 1. A heat exchanger comprising:
>
> a heat exchanger body comprising a plurality of stacked panels defining an internal manifold and an external manifold;
>
> each of said stacked panels including an internal structure partially defining the internal manifold, an external structure partially defining the external manifold, and a plurality of ribs connecting the internal structure to the external structure;
>
> wherein each of said ribs further comprises a channel protruding into said rib and being paired with a corresponding rib of an adjacent panel, such that each of said ribs and the corresponding rib defining a tortuous cooling passage fluidly connecting the internal manifold to the external manifold, the tortuous cooling passage being in plane with a pair of said stacked panels and being configured to allow thermal growth of the passage without requiring thermal growth of the external manifold; and
>
> each of said stacked panels being bonded to at least one adjacent stacked panel.

REFERENCES

The prior art relied upon by the Examiner is:

Menzel	US 1,669,062	May 8, 1928
Stein	US 3,785,435	Jan. 15, 1974
Östbo	US 4,285,397	Aug. 25, 1981
Martin	US 4,431,050	Feb. 14, 1984
Barone	US 2009/0049794 A1	Feb. 26, 2009

REJECTIONS

Claims 1, 7, 9–11, 16, and 24 stand rejected under 35 U.S.C. § 103 as being unpatentable over Stein and Martin. Ans. 3.

Claim 4 stands rejected under 35 U.S.C. § 103 as being unpatentable over Stein, Martin, and Barone. Ans. 6.

Claims 5, 6, 8, 12, and 15 stand rejected under 35 U.S.C. § 103 as being unpatentable over Stein, Martin, and Östbo. Ans. 7.

Claims 13 and 14 stand rejected under 35 U.S.C. § 103 as being unpatentable over Stein, Martin, and Menzel. Ans. 9.

OPINION

The main issue in this case boils down to claim construction. The phrase at issue is "cooling passage . . . being configured to allow thermal growth of the passage without requiring thermal growth of the external manifold." The Examiner finds that this element is met by Stein's teaching of inhibiting thermal growth of the external manifold. Ans. 11–12. Appellant argues that "even if Stein discloses inhibiting thermal growth of the frame, this acknowledges that there is still thermal growth of the frame" and that "[t]here is no teaching within Stein that the cooling passages of Stein are configured to allow thermal growth without requiring thermal growth of the external manifold (the frame)." App. Br. 4.

The Examiner "finds Appellant[']s claim construction to be unreasonably narrow" because the claim language at issue does not state "without requiring **any** thermal expansion." Ans. 11. Appellant argues, and we agree that, "[u]nder a plain English interpretation of the term 'without requiring thermal growth[,]' if any thermal growth *is* required [then] the

claim limitation is not met." We see no difference between "without requiring *any* thermal expansion [or growth]" and "without requiring thermal [expansion or growth]." Essentially, we interpret the claims to mean that all thermal growth or expansion of the manifold/frame is prohibited in order to meet the claims. The Examiner finds only that Stein inhibits thermal growth, which, as Appellant points out, implies that some growth occurs. Accordingly, Stein's inhibiting does not reach the level of prohibiting necessary to meet the claims.

All of the Examiner's rejections rely on this improper claim construction of the phrase at issue. As such, we do not sustain any of the prior art rejections.

DECISION

The Examiner's rejections are REVERSED.

DECISION SUMMARY

Claims Rejected	**Basis**	**Affirmed**	**Reversed**
1, 7, 9–11, 16, 24	§ 103 over Stein and Martin	None	1, 7, 9–11, 16, 24
4	§ 103 over Stein, Martin, and Barone	None	4
5, 6, 8, 12, 15	§ 103 over Stein, Martin, and Östbo	None	5, 6, 8, 12, 15
13, 14	§ 103 over Stein, Martin, and Menzel	None	13, 14
Overall Outcome			1, 4–16, 24

REVERSED