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EXAMINER	
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte LEE DROZDENKO, JAMES O. HANSEN, JESSE C. MEYER, MARIA C. KIREJCZYK, SCOT A. WEBB, BRANDON A. GATES, and RICHARD B. BERGETHON

Appeal 2020-001293
Application 15/039,929
Technology Center 3700

Before: PHILLIP J. KAUFFMAN, ANNETTE R. REIMERS, and TARA L. HUTCHINGS, *Administrative Patent Judges*.

HUTCHINGS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant[1] appeals under 35 U.S.C. § 134(a) from the Examiner's final rejection of claims 1, 3, 5–11, 13, and 15–20. We have jurisdiction under 35 U.S.C. § 6(b).

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[1] We use the term "Appellant" to refer to "applicant" as defined in 37 C.F.R. § 1.42. Our decision references Appellant's Appeal Brief ("Appeal Br.," filed Sept. 6, 2019), and Reply Brief ("Reply Br.," filed Nov. 27, 2019), and the Examiner's Answer ("Ans.," mailed Nov. 4, 2019), and Final Office Action ("Final Act.," mailed Mar. 7, 2019). Appellant identifies the real party in interest as Raytheon Technologies Corporation, formerly known as

We REVERSE.

CLAIMED INVENTON

The claimed invention "relates to an adhesive and fabric stackup utilized between a sheath and a fan blade" for a gas turbine engine. Spec. ¶¶ 2–3.

Claims 1 and 11 are independent. Claim 1 is reproduced below:

1. A blade comprising:

an airfoil extending from a trailing edge to a leading edge, said airfoil including a body formed of an aluminum containing material;

a sheath at said leading edge and formed of a titanium containing material, with a sandwich positioned intermediate said sheath and said airfoil body, said sandwich including an outer adhesive layer adjacent the sheath, an intermediate layer and an inner adhesive layer adjacent the body;

wherein said fabric layer is a woven fabric layer; and

wherein said woven fabric layer has holes that are less than .001 inch on average.

REJECTION

Claims 1, 3, 5–11, 13, and 15–20 are rejected under 35 U.S.C. § 103 as unpatentable over Parkin (US 2013/0239586 A1, pub. Sept. 19, 2013).

United Technologies Corporation. "Update to Real Party in Interest," dated April 23, 2020.

ISSUE

Did the Examiner err in finding that it would have been an obvious design choice to modify the holes of Parkin's scrim to be less than .001 inch on average?

ANALYSIS

Appellant argues that modifying Parkin's scrim to have holes less than .001 inch, as required by independent claims 1 and 11, is not an obvious matter of design choice. Appeal Br. 2–5; Reply Br. 1–2.

The Examiner, recognizing that Parkin's woven fabric (a scrim) does not disclose a holes less than .001 inch, determines that it would have been an obvious matter of design choice to modify Parkin's scrim to have the claimed hole size. Final Act. 4, 7. In support of this argument, the Examiner cites *In re Rose*, 220 F.2d 459 (CCPA 1955) for the proposition that a change in size is generally recognized as within the level of ordinary skill in the art. *Id.*

The Examiner's reliance on *In re Rose* is misplaced. In *Rose*, the appellant argued that the claimed "lumber package" was large and required a lift truck for handling; whereas, the prior art packages (a package of relatively small pieces of lumber and a package of window screen frames) could be lifted by hand. *Rose*, 220 F.2d at 463. The court held that "this limitation [(i.e., size and weight of the package)] is [not] patentably significant since it at most relates to the size of the article under consideration which is not ordinarily a matter of invention." *Id.* (citation omitted).

Here, in contrast, the Examiner does not propose a change in the overall size of the article under consideration (i.e., a blade (claim 1); an

engine (claim 11)). Instead, the Examiner proposes changing the structure of Parker's woven fabric (a scrim) to that of a tightly woven fabric having holes less than .001 inch on average, even though the Specification describes the tightly woven fabric as performing differently from a scrim. *In re Gal*, 980 F.2d 717, 719 (Fed. Cir. 1992) (holding that a finding of obvious design choice is precluded when the claimed structure and the function it performs are different from the prior art).

In this regard, Appellant's Specification describes that prior art techniques have used a scrim material between a sheath and a fan blade of a gas turbine engine to prevent galvanic corrosion. Spec. ¶¶ 7–8. However, the scrim material "has not been as successful as would be desired." *Id.* ¶ 8. The Specification provides that a scrim, in contrast with the woven fiber recited in Appellant's claims, "has holes more on the order of 1/16th of an inch" (.0625 inch).[2] Spec. ¶ 50. Appellant's woven fabric is "tightly woven" and "to the extent there are any holes . . . , they are exceedingly small." *Id.* ¶ 49 (describing that the holes are less than .001 inch, and in some embodiments are less than .0005 inch and other embodiments "effectively have no holes whatsoever").

Appellant's description in the Specification of a scrim as a woven fiber having holes significantly larger than the claimed woven fabric is consistent with the ordinary meaning of the term scrim as an open or loosely woven fabric. *See, e.g.*, Scrim: "[D]urable, loosely woven fabric, often cotton, linen, hemp, or a synthetic fiber, used for curtains or upholstery

[2] The Specification converts 1/16th of an inch to .062 cm; however, the correct conversion is 0.159 cm. Presumably "cm" is a typographical error meant to be "in."

lining or in industry." American Heritage® Dictionary of the English Language (5th Ed. 2016) (last accessed Sept. 21, 2020), https://www.thefreedictionary.com/scrim; Scrim: "[A]n open-weave muslin or hessian fabric, used in upholstery, lining, building, and in the theatre to create the illusion of a solid wall or to suggest haziness, etc[.], according to lighting." Collins English Dictionary (12th Ed. 2020) (last accessed Sept. 21, 2020), https://www.thefreedictionary.com/scrim; *see also* Ans. 4 (citing Merriam-Webster Dictionary's definition of Scrim: "[D]urable plain-woven usually cotton fabric for use in clothing, curtains, building, and industry.").[3] The Examiner's proposed definition of the term "scrim" is consistent with that described above in the Specification.

In short, the Examiner has not demonstrated that the substitution of "woven fabric layer ha[ving] holes that are less than .001 inch on average" for the scrim described in Parkin would have been an obvious matter of design choice. Final Act. 4, 7; *see also* Ans. 4–7. Nor has the Examiner adequately articulated reasoning as to why one of ordinary skill in the art would have been motivated to substitute a "woven fabric layer ha[ving] holes that are less than .001 inch on average" for the scrim described in Parkin. Final Act. 4, 7; *see also* Ans. 4–7.

Therefore, we do not sustain the rejection of claims 1, 3, 5–11, 13, and 15–20 under 35 U.S.C. § 103 as unpatentable over Parkin.

[3] https://www.merriam-webster.com/dictionary/scrim (last accessed Sept. 14, 2020).

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Basis/References	Affirmed	Reversed
1, 3, 5–11, 13, 15–20	103	Parkin		1, 3, 5–11, 13, 15–20

REVERSED