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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte MICHAEL PARKIN, PHILLIP ALEXANDER, and
CARL BRIAN KLINETOB

Appeal 2014-008834
Application 12/955,323
Technology Center 3700

Before CHARLES N. GREENHUT, LYNNE H. BROWNE, and
JILL D. HILL, *Administrative Patent Judges*.

BROWNE, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Michael Parkin et al. (Appellants) appeal under 35 U.S.C. § 134(a) from the rejection of claims 1–19. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

CLAIMED SUBJECT MATTER

Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A composite airfoil comprising:
a core including a three-dimensional network of fibers, the core defining an airfoil section and a root section; and
a composite skin covering a portion of the core excluding the root section.

REFERENCES

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Carlson	US 3,762,835	Oct. 2, 1973
Jonas	US 3,796,513	Mar. 12, 1974
Ellis	US 4,118,147	Oct. 3, 1978
Baldwin	US 5,279,892	Jan. 18, 1994

REJECTIONS¹

- I. Claims 1, 2, 4–6, and 11–19² stand rejected under 35 U.S.C. § 103(a) as unpatentable over Baldwin and Ellis.
- II. Claims 1, 3, and 7 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Baldwin and Jonas.
- III. Claims 8–10 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Baldwin, Ellis, and Carlson.

¹ The Examiner withdraws the rejection of claims 5, 6, 14, and 15 under 35 U.S.C. § 112, second paragraph, in the Answer. Ans. 5.

² Although the statement of this rejection refers to claims 1, 2, 4–6, and 11–15, the body of the rejection also addresses claims 16–19. Accordingly, we understand claims 1, 2, 4–6, and 11–19 to be subject to this ground of rejection.

DISCUSSION

Rejection I

The Examiner finds that Baldwin discloses all of the claim limitations except a composite skin that does not cover the root section. *See* Final Act.

4. The Examiner further finds that “Ellis teaches a turbine blade having a composite skin (36) covering a portion of the core excluding the root.” *Id.* Based on these findings, the Examiner determines that it would have been obvious “to modify the skin covering of the composite airfoil as taught by Baldwin by excluding the skin from covering the root as taught by Ellis in order to reduce vibratory modes and chordwise bending.” *Id.* (citing Ellis 3:51, 60–61).

Appellants contend that “[s]ince Baldwin’s root already has a skin, one of ordinary skill in the art would not remove the skin in order to try to achieve the noted benefits.” Appeal Br. 4. In support of this contention, Appellants notes that in Ellis “[t]he benefit of reducing vibratory modes and chordwise bending bears no connection to excluding covering a root with a skin because Ellis’ root is uncovered before and after his substitution of composite for a portion of the metal.” *Id.* Based on these facts, Appellant argues that “it necessarily must be the substitution of a portion of the metal with composite, not exclusion of covering the root with a skin, which leads to Ellis’ benefits,” thus, “even assuming one of ordinary skill would try to achieve such benefits in Baldwin, which they would not, the achievement of these benefits does not require exclusion of covering the root with a skin.” *Id.*

Appellants are correct. Ellis does not indicate that it achieves its benefits by excluding the skin from the root portion. *See, generally*, Ellis. Thus, the Examiner's reasoning lacks rationale underpinning.

For this reason, we do not sustain the Examiner's decision rejecting claim 1, and claims 2, 4–6, 16, and 17, which depend therefrom. Claim 11 also requires “a composite skin covering a portion of the core excluding the root section” and claim 12 requires “covering a portion of the core excluding the root section with a composite skin.” Appeal Br. 10. Accordingly, we do not sustain the Examiner's decision rejecting claims 11 and 12, claim 18 (which depends from claim 11), and claims 13–15 and 19 (which depend from claim 12), for the same reason.

Rejection II

Again, the Examiner finds that Baldwin discloses all of the claim limitations except a composite skin that does not cover the root section. *See* Final Act. 5. The Examiner further finds that “Jonas teaches a turbine blade having a composite skin (col. 2 ln. 5-11) covering a portion of the blade excluding the root.” *Id.* Based on these findings, the Examiner determines that it would have been obvious “to modify the skin covering of the composite airfoil as taught by Baldwin by excluding the skin from covering the root as taught by Jonas in order to dampen vibrations (col. 2 ln. 9).” *Id.*

Appellants argue that:

The benefit of damping vibrations bears no connection to excluding covering a root with a skin because Jonas' root is uncovered with or without the damping material in the airfoil section. Thus, it necessarily must be the use of the damping material in the airfoil section, not exclusion of covering the root with a skin, which leads to Jonas' benefits. In other words, even assuming one of ordinary skill would try to achieve such benefits in Baldwin, which they would not, the achievement of these

benefits does not require exclusion of covering the root with a skin.

Appeal Br. 7.

Appellants are correct. Jonas does not indicate that it achieves its benefits by excluding the skin from the root portion. *See, generally*, Jonas. Thus, the Examiner's reasoning lacks rationale underpinning.

Rejection III

The rejection of claims 8–10 relies upon the same erroneous reasoning as the rejection of claim 1 discussed *supra*. Accordingly, we do not sustain the Examiner's decision rejecting claims 8–10 for the same reason.

DECISION

The Examiner's rejections of claims 1–19 are REVERSED.

REVERSED