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EXAMINER
DAM, DUSTIN Q

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ROLAND WINSTON and
JEFFREY M. GORDON

Appeal 2011-010411
Application 11/084,882
Technology Center 1700

Before RICHARD E. SCHAFER, PETER F. KRATZ, and
GRACE KARAFFA OBERMANN, *Administrative Patent Judges*.

OBERMANN, *Administrative Patent Judge*.

DECISION ON APPEAL

The named inventors (collectively "Appellant") appeal under 35 U.S.C. § 134 from the final rejection of claims 1-2, 4-13, and 21-22 directed to a solar energy system. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

STATEMENT OF THE CASE

Claim 1 is illustrative of the subject matter on appeal:

1. A solar energy system, comprising:

an aplanatic optical imaging system, wherein the imaging system includes a primary mirror and a secondary mirror;

a non-imaging solar concentrator to collect light from the aplanatic optical imaging system; and

a solar cell receiving light from the non-imaging solar concentrator, the solar cell creating an electrical output.

THE REJECTIONS

Appellant seeks review of the following rejections entered under 35 U.S.C. § 103(a):

1. Claims 1, 4-10, 12-13, and 21-22 over Shifman (US 2005/0046977 A1, published March 3, 2005) in view of Hallam (US 4,598,981, issued July 8, 1986);

2. Claim 2 over Shifman in view of Hallam and Aylaian (US 2004/0084077 A1, published May 6, 2004); and

3. Claim 11 over Shifman in view of Hallam and Winston (US 4,002,499, issued January 11, 1977).

ANALYSIS

Claim 1, the only independent claim, is directed to a solar energy system that comprises "an aplanatic optical imaging system." There is agreement that Shifman describes a solar energy system that employs a classic Cassegrainian optical imaging system, which is not aplanatic. *Compare* Ans. 9 *with* App. Br. 6 and Reply Br. 2.[1] The nub of the dispute is whether the applied art would have led a skilled artisan to replace Shifman's classic Cassegrainian optical imaging system with the aplanatic system that Hallam describes for use in a wide-angle flat field telescope. Ans. 4, 9-10; App. Br. 8-9; Reply Br. 2-3; *see* Hallam 1:17-45.

[1] We refer to the Appeal Brief filed August 23, 2010 ("App. Br."), the Examiner's Answer mailed February 14, 2011 ("Ans."), and the Reply Brief filed April 14, 2011 ("Reply Br.").

Even if we accept that Hallam is analogous art, the record lacks findings sufficient to establish that the applied art would have led a skilled artisan to the combination advanced by the Examiner. Ans. 9-10. The Examiner finds that Hallam discloses "that the best performing two mirror system is an aplanatic Cassegrain system as it corrects for spherical aberration and coma." Ans. 4 (citing Hallam 1:27-29). Appellant counters that correcting for spherical aberration and coma is important when the goal is to capture clear images in a wide-angle flat field telescope imaging system as taught by Hallam, but is irrelevant in a solar energy utilization system as taught by Shifman, where the goal "is to collect as much light as possible" without deference to "the clarity (e.g., optical image distortion) of the collected radiation." App. Br.9; *see* Reply Br. 2-3. The Examiner responds by repeating, four times, Hallam's reference to "the best performing two mirror system" for use in field telescopes, Ans. 9, 10, but never meets the gravamen of Appellant's argument: The Examiner identifies no evidence that a skilled artisan, seeking to improve Shifman's solar energy system, would have had any reason to correct for spherical aberration or coma. App. Br. 9; Reply Br. 2-3.

On this record, we reverse the rejections of claims 1-2, 4-13, and 21-22.

<u>REVERSED</u>

sld