UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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*Ex parte* RONNY ANDREAS ANTONIUS MARIA JACOBS,
BERTRAND JOHAN EDWARD HONTELE,
and ANTONIUS ADRIANUS MARIA MARINUS

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Appeal 2007-1965
Application 10/371,027[1]
Technology Center 2800

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Decided: March 3, 2008

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*Before*: JOSEPH L. DIXON, ANITA PELLMAN GROSS,
and JAY P. LUCAS, *Administrative Patent Judges*.

LUCAS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF CASE

Appellants appeal from a final rejection of claims 1 to 5 and 8 to 22 under authority of 35 U.S.C. § 134. The Board of Patent Appeals and Interferences (BPAI) has jurisdiction under 35 U.S.C. § 6(b).

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[1] Application filed February 20, 2003. Appellants claim the benefit under 35 U.S.C. § 119 of EPO application 00200370.5, filed 02/03/2000. Application 10/371,027 is a continuation of 09/773,159, filed 1/31/01. The real party in interest is U.S. Philips Corp., a Delaware corporation.

Appellants' invention relates to a power supply for a light emitting diode (LED) lighting module, such as one used for backlighting in a liquid crystal display (LCD). In the words of the Appellants:

> It is an object of the invention to provide an effiecient, reliable, inexpensive and simple supply assembly for a LED lighting module with an improved efficacy.
>
> This is achieved in accordance with the invention in that the burst control unit is capable of switching the power supply unit on and off with the burst frequency. In this case, the supply unit is in the on-state only when current is actually being supplied, so that the generation of heat energy losses are minimized, resulting in an improved efficacy of the system.
>
> Preferably, the burst control unit comprises a pulse-duration modulator which is capable of controlling the length of the pulses during which the supply unit is in the on-state. This enables the mean light output to be controlled.

(Specification, page 1).

Claim 1 is exemplary:

> 1. A supply assembly for a LED lighting module, comprising:
> a supply unit coupled to a source of supply voltage, means for coupling the LED lighting module to the supply unit, and a burst control unit which for switching the power to the LED lighting module on and off with a burst frequency (fburst) so as to control a mean light output of the LED lighting module, characterized in that the burst control unit switches the supply unit on and off with the burst frequency (fburst).

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

| | | |
|---|---|---|
| Lebens | US 6,095,661 | Aug. 1, 2000 |

Rejections:

R1: Claims 1 to 5, 10 to 12, and 14 to 22 stand rejected under 35 U.S.C. § 102(e) for being anticipated by Lebens.

R2: Claims 8, 9, and 13 stand rejected under 35 U.S.C. § 103(a) for being obvious over Lebens.

Groups of Claims:

See 37 CFR § 41.37 (c) (vii). *See also In re McDaniel*, 293 F.3d 1379, 1383 (Fed. Cir. 2002) ("If the brief fails to meet either requirement [of 37 CFR § 1.192(c)(7)], the Board is free to select a single claim from each group of claims subject to a common ground of rejection as representative of all claims in that group and to decide the appeal of that rejection based solely on the selected representative claim.").

Appellants contend that the claimed subject matter is not anticipated by Lebens, or rendered obvious by Lebens, for failure of the reference to "teach or suggest a burst control unit switching a supply unit on and off with a burst frequency". (Br., p. 11). The Examiner contends that Lebens does teach the claimed switching of the supply unit.

Rather than repeat the arguments of Appellants or the Examiner, we make reference to the Briefs and the Answer for their respective details. Only those arguments actually made by Appellants have been considered in this decision. Arguments which Appellants could have made but chose not

to make in the Briefs have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(vii) (2004).[2]

We affirm the rejections.

## ISSUE

The issue is whether Appellants have shown that the Examiner erred in rejecting claims 1 to 5, 10 to 12, and 14 to 22 under 35 U.S.C. § 102(e) and claims 8, 9 and 13 under 35 U.S.C. § 103(a). The issue turns on whether the Lebens reference teaches the claimed limitations, specifically a burst control unit switching a supply unit on and off with a burst frequency.

## FINDINGS OF FACT

The record supports the following findings of fact (FF) by a preponderance of the evidence.

1. Appellants have invented a power supply assembly for a LED lighting module that supplies pulsed DC power to the module. (Spec. p. 1, l. 1) The power is controlled by a burst control unit that switches the power supply unit on and off at a burst frequency. (Ibid, ll. 22-23). By

[2] Appellants have not presented any substantive arguments directed separately to the patentability of the dependent claims or related claims in each group, except as will be noted in this opinion. In the absence of a separate argument with respect to those claims, they stand or fall with the representative independent claim. *See In re Young,* 927 F.2d 588, 590 (Fed. Cir. 1991).

controlling the duration of the pulses, the intensity (mean light output) of the LED light can be regulated. (Spec. p. 4, ll. 18-19).

2. Examiner has cited the reference, Lebens. Lebens teaches a multicolor LED flashlight controlled, in one embodiment, by changing the pulse width of a DC voltage source. (Abstract, middle). An embodiment of the flashlight circuitry, displayed in Figure 7, teaches control switches 140 set by the user to control circuit 730. (Col. 12, ll. 16-17). Circuit 730 outputs a pulse width signal based on the user selections to control the activation of transistor 750, which controls the connection of the power to the LED array 751. (Id., l. 19). The pulse width from 730 controls the light intensity, as taught in Col. 12, line 10. (Color is controlled by pulse height.) Transistor 755, which is also controlled by control circuit 730, maintains the current at a determined level when it is flowing. (Col. 12, l. 18). Switch 147 (called 146 in the text) is described as a momentary contact switch used to activate light output. (Col. 8, ll. 16-17).

PRINCIPLES OF LAW

"To reject claims in an application under section 103, an examiner must show an unrebutted *prima facie* case of obviousness. … On appeal to the Board, an applicant can overcome a rejection by showing insufficient evidence of *prima facie* obviousness or by rebutting the *prima facie* case with evidence of secondary indicia of nonobviousness." [citations removed] In re Rouffet, 149 F.3d 1350, 1355 (Fed. Cir. 1998)

It is axiomatic that anticipation of a claim under § 102 can be found only if the prior art reference discloses every element of the claim. See *In re King*, 801 F.2d 1324, 1326 (Fed. Cir. 1986) and *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co*., 730 F.2d 1452, 1458 (Fed. Cir. 1984).

"[T]he words of a claim 'are generally given their ordinary and customary meaning.'" *Phillips v. AWH Corp.,* 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (internal citations omitted). "[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." *Phillips v. AWH Corp.*, 415 F.3d at 1313 (Fed. Cir. 2005) (en banc).

## ANALYSIS

From our review of the administrative record, we find that Examiner has presented a prima facie case for the rejections of Appellants' claims under 35 U.S.C. §§ 102 and 103. The prima facie cases are presented on pages 3 to 8 of the Examiner's Answer.

In opposition, Appellants present one main argument, summarized in the Brief as "a failure by *Lebens* to teach or suggest a burst control unit switching a supply unit on and off with a burst frequency". (Br., p. 11, top). Appellants argue that transistor 755 does not qualify as the supply unit, as it does not independently supply power to the LEDs 751. Instead the battery 120 and current controlled transistor 755, control circuit 730 and even feature switches 140 are all part of the supply unit of Lebens. (Id.) However, Appellants argue, "neither transistor 750 or 755 can independently

serve as a supply unit under the operative principles of Lebens and control circuit 730 is never used to turn on and off the supply unit because it would in effect turn itself off without any means of turning itself back on." (Br., p. 12, top). Appellants traverse the rejections of the other claims, basically indicating that Lebens fails to show the features of each claim, but not presenting an independent argument for those claims beyond that expressed above. (Br., p. 13 to 20).

Examiner in the Answer disagrees that transistor 755 by itself does not qualify as a supply unit, pointing out that transistor 755 supplies the application of power to the cathode of LED 751, thus acting as a voltage source providing "negative supply voltage" when both transistor 750 and switch 147 are on. (Ans., p. 9, top). Effectively this opens and closes the circuit from the power source to the LED light module, in a like manner of a switch. Appellants argue in the Reply Brief that Lebens's switch 147 would have to be turned on and off at burst frequency for the supply to be switched as claimed. "Thus, at best, Lebens teaches a supply unit 730, 750, 755 capable in a continual on state (i.e., switch 147 is closed) of controlling power (i.e., voltage and current) from battery 120 to LEDs 751 at a burst frequency with a current regulation." (Reply Br., p. 12, last line). We address this argument next.

This argument focuses on the term "a supply unit" as expressed in the claim. The term must be taken as plainly understood in this art, as it is not distinctly and expressly defined by Appellants in the Specification. (See *Phillips v. AWH Corp.*, cited above). The supply unit need not be a single transistor, as Appellants point out in the Reply Brief argument quoted above,

but may constitute all of the elements of Lebens recited in that quote. The essence of a rejection under 35 U.S.C. § 102 is whether all of the elements claimed can be found in the cited reference, Lebens. (See *In re King* cited above). We find that the Examiner did not err in applying that reference to the claim, as all of the claimed elements are present, as described by the Examiner in the rejection. (Ans., p. 3). Specifically with respect to Appellants' assertion that Lebens does not remove all power from the supply unit during the time between pulses, we find that such a requirement is not present in the claim. The claim, when broadly and reasonably interpreted, can be found in Lebens, in which the control unit switches the supply unit (the named components) "off" at the burst frequency with respect to the LED lighting module to which the supply unit is coupled. We note that in both the reference and the claimed invention power is maintained to the control unit, as it must be. Other parts of the supply unit in Lebens may be connected to one terminal of the battery or the other, but the supply unit is not "on" until the power flows.

It is noted that Appellants have expressed the coupling means for coupling the LED lighting module to the supply module with respect to the conductors as mentioned on page 8 of the Brief, and we have accepted that interpretation.

## CONCLUSION OF LAW

Based on the findings of facts and analysis above, we conclude that the Examiner did not err in rejecting claims 1 to 5, 10 to 12, and 14 to 22 under 35 U.S.C. § 102(e); nor claims 8, 9, and 13 under 35 U.S.C. § 103(a).

DECISION

The Examiner's rejections of claims 1 to 5 and 8 to 22 are affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. §1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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