

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte SUN YU and DAVID A. PERRIN

Appeal 2006-2924
Application 10/668,522
Technology Center 3600

Decided: April 18, 2007

Before ANITA PELLMAN GROSS, JENNIFER D. BAHR, and
ROBERT E. NAPPI, *Administrative Patent Judges*.

BAHR, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Sun Yu and David A. Perrin (Appellants) appeal under 35 U.S.C. § 134 from the Examiner's decision rejecting claims 1-3, 7, 10, 11, and 13. Claims 4-6, 8, 9, and 12, the only other pending claims, have been withdrawn from consideration under 37 C.F.R. § 1.142(b) as not being

directed to elected species. We have jurisdiction over this appeal under 35 U.S.C. § 6 (2002).

Appellants' invention is directed to printed material and, in particular, to a substrate having indicia printed thereon that is readable under ultraviolet light and an ultraviolet light attached to the substrate (Specification 1:4-6). Independent claims 1 and 11 are representative of the claimed invention and read as follows:

1. An illuminated greeting card comprising:
 - a substrate sheet having indicia formed of a first ink readable under visible light and having indicia thereon formed of a second ink readable under light having a wavelength of between 350 and 400 nanometers; and
 - an ultraviolet light emitting diode flashlight having a light source consisting of: a single light emitting diode and having a light emission of between 350 and 400 nanometers.

11. An illuminated greeting card comprising:
 - a folded substrate having an outer writing surface and an inner writing surface, wherein at least one of the exterior writing surface and the interior writing surface has thereon indicia formed of a first ink readable under visible light and indicia formed of a second ink visible under incident light having a wavelength of between 350 and 400 nanometers;
 - an ultraviolet light emitting diode flashlight having a light emission of between 350 and 400 nanometers; and
 - a securement retaining said ultraviolet light emitting diode flashlight oriented such that when said substrate is horizontal, emission from said flashlight illuminates at least one of the exterior writing surface and the interior writing surface.

The Examiner relies upon the following as evidence of unpatentability:

Ristow	US 1,861,136	May 31, 1932
Heinze	US 6,047,820	Apr. 11, 2000
Funk	US 6,269,169 B1	Jul. 31, 2001
Solomon	US 2003/0025316 A1	Feb. 06, 2003
Prescott	US 6,805,459 B1	Oct. 19, 2004

Appellants seek review of the Examiner's rejections under 35 U.S.C. § 103(a) of claims 1, 3, and 10 as unpatentable over Solomon in view of Ristow and Funk, claims 2, 7, and 11 as unpatentable over Solomon in view of Ristow, Funk, and Prescott, and claim 13 as unpatentable over Solomon in view of Ristow, Funk, and Heinze.

The Examiner provides reasoning in support of the rejections in the Answer (mailed May 4, 2006). Appellants present opposing arguments in the Brief (filed April 14, 2006) and Reply Brief (filed July 7, 2006).

THE ISSUES

With respect to the rejection of claims 1, 3, and 10 as unpatentable over Solomon in view of Ristow and Funk, Appellants do not argue the patentability of dependent claims 3 and 10 apart from claim 1, allowing them to stand or fall with representative claim 1. The issue before us with respect to this rejection is whether Appellants have demonstrated that the Examiner erred in concluding the combined teachings of the references would have suggested the invention recited in claim 1 and, in particular, modification of Solomon to provide "an ultraviolet light emitting diode flashlight having a light source consisting of: a single light emitting diode" as called for in claim 1.

Appellants do not separately argue the rejection of claim 13 as unpatentable over Solomon in view of Ristow, Funk, and Heinze apart from the rejection of claim 1. Claim 13 therefore stands or falls with claim 1. *See In re Nielson*, 816 F.2d 1567, 1572, 2 USPQ2d 1525, 1528 (Fed. Cir. 1987).

With respect to the rejection of claims 2, 7, and 11 as unpatentable over Solomon in view of Ristow, Funk, and Prescott, Appellants do not argue claims 2 and 7 apart from claim 11, permitting them to stand or fall with representative claim 11. The dispositive issues in deciding the appeal of the rejection of claim 11 are (1) whether Appellants have demonstrated that the Examiner erred in concluding the combined teachings of the applied references would have suggested providing Solomon with an ultraviolet light emitting diode “flashlight” as called for in claim 11 and (2) whether Appellants have demonstrated that the Examiner erred in concluding the combined teachings of the applied references would have suggested providing Solomon with a securement retaining the ultraviolet light emitting diode flashlight, as also called for in claim 11.

FINDINGS OF FACT

FF1. Appellants do not provide a definition of “flashlight” in their Specification.

FF2. Appellants describe, in the embodiment of Fig. 4, an ultraviolet flashlight in the form of an ultraviolet light emitting diode (UV LED) 62 housed in a housing along with a battery 66 and switch 70 (Specification 5:15-23) or, in the embodiment depicted in Figs. 5A and 5B, in the form of a UV LED 102 including at least one button-type battery 106 and spring loaded switch 170 that activates the UV LED 102 upon the folded portion of

the greeting card being removed from contact with the lower writeable surface (Specification 6:7-19). Appellants' UV LED illuminates the indicia on the greeting card visible only under UV light (Specification 3-4). As illustrated in Figs. 1 and 5B, this might encompass the entire width of the card or substrate, indicating Appellants' characterization of UV LEDs as capable of relatively broad angle illumination.

FF3. Solomon discloses a writing system, applicable to all forms of writing and drawing, and to diaries, journals, stationery, and games in particular, with the intention of guarding the handwritten or drawn content using a combination of special ink visible to the human eye only upon excitation by ultraviolet light (ultraviolet ink), paper, and ultraviolet light (Solomon, [0001], [0015], and [0017]). Solomon's invention is intended to be an improvement over prior art diaries or journals with simple padlock and combination lock devices, whose very existence may invite unwanted intrusion (Solomon, [0002]).

FF4. Solomon's detailed disclosure is directed to the preferred embodiment of a bound book, such as a diary or journal (Solomon, [0012] – [0020]). Solomon does not describe in detail an embodiment of the invention directed to stationery, other than to mention that correspondence may be written using the ultraviolet ink and that the recipient would be able to read the correspondence only through the use of an ultraviolet light (Solomon, [0021]).

FF5. Solomon discloses an ultraviolet light bulb 11, which bulb is cylindrical in the preferred embodiment, with the light being emitted in a direction away from the axis of the cylindrical light bulb, allowing for a broad angle of emitted ultraviolet light of uniform intensity for ease of

writing and reading (Solomon, [0013], [0014]). The bulb is fixed in a portable lamp 10, preferably powered by batteries 12, which lamp preferably is lightweight and capable of being easily held by a child and which may also include a stand to allow the ultraviolet light to shine in a desired direction (Solomon, [0013]).

FF6. Ristow evidences that greeting cards were recognized by those skilled in the art of stationery at the time of Appellants' invention as falling within the class of stationery (Ristow 1:1-3). Ristow is directed, in particular, to a combined greeting card and gift holder (Ristow 1:1-3) comprising suitable greeting matter 16 on its outer plies (Ristow 1:77-79).

FF7. Appellants do not specifically challenge the Examiner's determination that it would have been obvious to one skilled in the art, in view of the teachings of Ristow, to modify Solomon by placing a first ink readable under visible light onto the stationery/greeting card to make the stationery/greeting card more aesthetically pleasing and to allow a desired message to be conveyed to all viewers of the stationery/greeting card (Answer 3).

FF8. Funk evidences that ultraviolet light emitting diodes (UV LEDs) were known in the art at the time of Appellants' invention (Funk, col. 6, ll. 36-38).

FF9. Prescott discloses a light source and an attachment means, such as a hook and loop fastener, for securing the light source to a book in an easily removable manner (Prescott, col. 4, ll. 8-13, col. 6, ll. 17-33).

FF10. Appellants do not challenge the Examiner's determination that it would have been obvious, in view of the teachings of Heinze, to modify Solomon by providing a package and instructions on how to use the contents of the package as called for in claim 13 (Answer 6).

ANALYSIS

Inasmuch as Solomon expressly states that the disclosed writing system is applicable to stationery (FF3) but does not provide any detailed description of an embodiment of the invention directed to stationery (FF4), the Examiner relies on the teachings of Ristow for details of one type of stationery, namely, a greeting card in combination with a gift holder. Appellants do not challenge the Examiner's determination that Ristow would have suggested providing ink readable in visible light on the stationery embodiment of Solomon's writing system to yield an aesthetically pleasing greeting card that would allow a desired message to be conveyed to all viewers of the card (FF7).

The Examiner contends that it would have been obvious to use a UV LED, a UV light source known at the time of Appellants' invention, as evidenced by Funk (FF8), to reduce the amount of heat generated and energy required to power the light source and to allow the light source to last longer (Answer 4) and, further, that it would have been within the skill in the art to use a single UV LED to reduce the amount of power required and to reduce the cost of the device (Answer 4). Appellants do not allege that one skilled in the art would not have appreciated the energy savings and cost efficiency offered by a UV LED over a UV bulb. Rather, Appellants argue that Funk only teaches an array of diodes, not a single diode, that the size and cost of a hybrid light of the type taught by Funk is impractical in the context of a greeting card, that Solomon elected to exclude UV LEDs as a possible light source, and that linkage of a UV light with a substrate is contrary to the security objective of Solomon (Br. 4-5).

Appellants' argument that linkage of a UV light with a substrate is contrary to the security objective of Solomon is unsound. Solomon expressly discloses the use of a UV light with the writing system. To the extent that Appellants' argument is directed to securing a UV light to the book, journal, stationery, or the like being contrary to the security objective of Solomon, this argument is not directed to subject matter recited in claim 1 and, thus, is not persuasive.

Appellants' argument that Solomon elected to exclude LEDs mischaracterizes Solomon's teachings. Solomon discloses bulbs but does not expressly exclude other forms of light sources. Simply that there are differences between two references is insufficient to establish that such references "teach away" from any combination thereof. *See In re Beattie*, 974 F.2d 1309, 1312-13, 24 USPQ2d 1040, 1042 (Fed. Cir. 1992). Given Appellants' characterization of UV LEDs as capable of relatively broad angle illumination, within the context of the invention (FF2), there is nothing in Solomon's discussion of the UV bulb that would have dissuaded one of ordinary skill in the art from selecting a UV LED in place of Solomon's bulb to illuminate the UV ink indicia.

Appellants correctly point out that Funk only discloses arrays of LEDs (Funk, col. 6, ll. 36-37) and may well be correct that the extensive arrays of sequentially energized light sources, including fluorescent, infrared, and UV lights, disclosed for Funk's document reader would be impractical in a greeting card. The Examiner's proposed modification, however, does not appear to involve the use or association of such an elaborate system of sequentially energized light sources with Solomon's stationery. Obviousness does not require that all of the features of the secondary

reference be bodily incorporated into the primary reference. *See In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). Moreover, the artisan is not compelled to blindly follow the teaching of one prior art reference over the other without the exercise of independent judgment. *See Lear Siegler, Inc. v. Aeroquip Corp.*, 733 F.2d 881, 889, 221 USPQ 1025, 1032 (Fed. Cir. 1984). Rather, the Examiner proposes modification of Solomon to use a single UV LED, a known UV light source, as evidenced by Funk (FF8), to illuminate the UV ink writing in a manner which reduces energy consumption, heat generation, and cost and provides a longer lasting light source. Such an arrangement would certainly appear to offer the simplicity befitting a greeting card.

Appellants also argue that the combination of references applied by the Examiner “fails to satisfy the limitations of a ‘flashlight’ as used within the claims and specification” (Br. 4), but do not cogently explain why this is the case. We determine the scope of the claims in patent applications “not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction ‘in light of the specification as it would be interpreted by one of ordinary skill in the art.’” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316, 75 USPQ2d 1321, 1329 (Fed. Cir. 2005) (en banc) (quoting *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364, 70 USPQ2d 1827, 1830 (Fed. Cir. 2004)). A “flashlight” is ordinarily understood to be “a portable electric light, usually operated by batteries” (*Webster’s New World Dictionary* 531 (David B. Guralnik ed., 2nd coll. ed., Simon & Schuster, Inc. 1984)) and Appellants’ Specification does not provide a definition or description of the UV LED “flashlight” that differs from the conventional use of this term. Solomon’s UV lamp, both without

modification and as modified in view of Funk, is a portable electric light operated by batteries (FF5) and thus satisfies the “flashlight” limitation.

Appellants’ argument that “[t]he prior art of record is devoid a greeting card having both visible and invisible ink indicia” (Reply Br. 2) appears to be directed to the applied references individually and not to their combination. Nonobviousness cannot be established by attacking the references individually when the rejection is predicated upon a combination of prior art disclosures. *See In re Merck & Co.*, 800 F.2d 1091, 1097, 231 USPQ 375, 380 (Fed. Cir. 1986).

For the foregoing reasons, Appellants’ arguments fail to demonstrate that the Examiner erred in concluding that the combined teachings of Solomon, Ristow, and Funk would have suggested the subject matter recited in claim 1. The rejection of claim 1, and claims 3 and 10 standing or falling with claim 1, and the rejection of claim 13, which stands or falls with the rejection of claim 1, as discussed above, are sustained.

Turning now to the rejection of claim 11 as unpatentable over Solomon in view of Ristow, Funk, and Prescott, for the reasons set forth above, Appellants’ arguments fail to demonstrate that the Examiner erred in determining that the applied references would have suggested providing an ultraviolet light emitting diode “flashlight” as called for in claim 11. Moreover, Appellants’ argument that the securement of a UV lighting device to a journal or diary would destroy the security purpose or objective of Solomon (Br. 5) is not well founded. First, claim 11 does not require that the UV LED flashlight be secured to the substrate. The securement of the UV LED flashlight in a portable lamp, having a stand, for example, to allow the UV light to shine in a desired direction, as taught by Solomon (FF5),

would appear to satisfy the “securement” limitation of claim 11. Moreover, provision of a hook and loop fastener, as taught by Prescott, to removably secure the UV LED flashlight to Solomon’s greeting card would not present the type of invitation to unwanted intrusion that Solomon seeks to avoid (FF3). Specifically, removal and storage of the UV LED flashlight in a location remote from the stationery or greeting card, leaving only one portion of a hook and loop fastener on the stationery or card, would not readily inform a would-be intruder of the existence of the UV light source or the presence of the UV ink writing.

In light of the above, Appellants’ arguments fail to demonstrate that the Examiner erred in concluding that the combined teachings of Solomon, Ristow, Funk, and Prescott would have suggested the subject matter of claim 11. The rejection of claim 11, as well as claims 2 and 7 standing or falling with claim 11, is sustained.

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SUMMARY

The decision of the Examiner to reject claims 1-3, 7, 10, 11, and 13 is 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) (2006).

AFFIRMED

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