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WILLIAM J. DAVIS INTERNATIONAL SPECIALTY PRODUCTS BLDG.8-2 1361 ALPS ROAD WAYNE, NJ 07470			EXAMINER LEE, SHUN K	
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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* THOMAS ELLWOOD SCHELL and DAVID F. LEWIS

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Appeal 2010-008827  
Application 11/602,554  
Technology Center 2800

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Before MAHSHID D. SAADAT, LARRY J. HUME,  
and JUSTIN BUSCH, *Administrative Patent Judges*.

SAADAT, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from the final rejection of claims 1-10 and 12, which are all the claims pending in this application as claim 11 has been canceled. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

## STATEMENT OF THE CASE

### *Introduction*

Appellants' invention relates to dosage distribution measurements absorbed by a radiation treatable material and a process for determining absolute dosage distribution (*see* Spec. p. 1).

Claim 1 is illustrative of the invention and reads as follows:

1. An improved radiation dosage measuring composition for a dosimeter comprising a self developing, radiochromic film suitable for measuring the relative radiation dosage distribution within the dosimeter and a co-acting, absolute radiation measuring amount of alanine in communication with said film and irradiated simultaneously with said film.

### *The Examiner's Rejections*

Claims 1-3 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Patel (US 7,227,158 B1) and Sharpe (*Progress Towards an Alanine/ESR Therapy Level Reference Dosimetry Service at NPL*, Applied Radiation and Isotopes, vol. 47, no. 11/12, pp. 1171-1175 (November-December 1996)). (*See* Ans. 3-4).

Claims 4-10 and 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Patel, Sharpe, and Donahue (US 5,359,200). (*See* Ans. 4-7).

### *Appellants' Contentions*

With respect to claim 1, Appellants contend the propriety of combining Patel with Sharpe by focusing on Patel's description of how the Self-indicating, Instant, Radiation Alert Dosimeter (SIRAD) is used with a conventional dosimeter such as Thermoluminescence dosimeters (TLDs) and X-ray film dosimeters, and argue that Patel teaches away from the

combination (App. Br. 7-9). Appellants further assert that Patel includes no discussion of an absolute radiation measuring dosimeter, other than combining the SIRAD with a TLD or X-ray film (App. Br. 9). Appellants further contend that the Examiner improperly gave no patentable weight to the claim limitation related to the alanine being “irradiated simultaneously with said film” (App. Br. 11-12).

Appellants provide similar arguments for claims 4, 9, and 12 and point out that Donahue does not teach the features alleged above to be missing from Patel and Sharpe (App. Br. 12-14). Appellants further argue the recited features of claims 9 and 12 and assert that the Examiner has pointed to no relevant teachings in the references, or provided reasons to combine the references (*see* App. Br. 14-16).

### ANALYSIS

We have reviewed the Examiner’s rejections in light of Appellants’ arguments that the Examiner has erred. We disagree with Appellants’ conclusions. We adopt as our own the findings and reasons set forth by the Examiner in the action from which this appeal is taken and the reasons set forth by the Examiner in the Examiner’s Answer in response to Appellants’ Appeal Brief. However, we highlight and address specific findings and arguments regarding claim 1 for emphasis as follows.

We specifically agree with the Examiner’s stated position that Patel does not teach away from the combination because the reference expressly teaches using TLD or X-ray dosimeters to confirm the reading obtained by the SIRAD (Ans. 9). We also agree with the Examiner’s response to each of Appellants’ arguments with respect to Patel’s teachings and whether the

combination would have made the dosimeter of Patel unsatisfactory for its intended purpose (Ans. 10). In particular, as stated by the Examiner, using Sharpe's alanine pellets as Patel's other type of dosimeter that confirms the reading by the SIRAD would have been obvious as an absolute radiation measuring dosimeter available to the skilled artisan (*see* Ans. 11-13).

Contrary to Appellants' position (Reply Br. 6) that Patel's TLD and X-ray dosimeters are examples of relative dosimeters, these two types of dosimeters are discussed in Patel as absolute dosimeters that are not instant or self-reading and must be sent to a laboratory for *determination of the dose* (*see* Patel, col. 2, ll. 59-65). As such, their combination with a relative dosimeter such as SIRAD, which is instant and self-reading, enables a user to detect a high dose instantly while also determining the dose made by the conventional dosimeters such as TLD and X-ray dosimeters (*see* Patel, col. 4, l. 64 – col. 5, l. 58).

We also agree with the Examiner's interpretation of the claimed alanine being "irradiated simultaneously with said film," based on the close proximity of the two types of material. The Examiner properly construes the claimed "in communication" as requiring the film and the alanine dosimeter to be close enough with respect to each other such that they are exposed to the same radiation or simultaneously irradiated (Ans. 16). Therefore, Patel's discussion of how SIRAD may be attached to the TLD dosimeter (*see* col. 8, ll. 14-52) indicates that both relative and absolute dosimeters are irradiated simultaneously.

With respect to the propriety of combining the references, as the rejections on appeal are based on the combination of Patel and Sharpe, or Patel, Sharpe, and Donahue, Appellants' challenge to the references

individually is not convincing of error in the Examiner's position. *See In re Keller*, 642 F.2d 413, 426 (CCPA 1981) ("one cannot show nonobviousness by attacking references individually where, as here, the rejections are based on combinations of references" (citations omitted)). Additionally, "the combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 416 (2007). In the present case, the Examiner found that the proposed combination would have resulted in using alanine as the absolute dosimeter in combination with the relative dosimeter of Patel (*see* Ans. 11-15 and 18-22). We find this articulated rationale to be sufficient to justify the combination. In other words, we find that the proposed substitution would have merely required the ordinarily skilled artisan to use common sense to appreciate that using alanine for the conventional dosimeter in combination with SIRAD would be substituting one known element for another resulting in a dual dosimeter for instant and relative reading as well as absolute determination of the radiation dose.

Similarly, we agree with the Examiner's response with respect to claims 4, 9, and 12 that the combination of Donahue with Patel and Sharpe discloses the disputed claim features (Ans. 19-22).

Therefore, we agree with the Examiner that the combination of Patel with Sharpe or with Sharpe and Donahue would have suggested all the recited limitations of independent claims 1, 4, 9, and 12 to one of ordinary skill in the art.

### CONCLUSION

On the record before us, we conclude that, because the references teach or suggest all the claim limitations, the Examiner did not err in rejecting claim 1 as obvious over Patel and Sharpe, or claims 4, 9, and 12 as obvious over Patel, Sharpe, and Donahue. Therefore, the Examiner did not err in rejecting claims 1-10 and 12.

### DECISION

The Examiner's decision rejecting claims 1-10 and 12 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)(1)(iv).

AFFIRMED

ELD