

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DALE MARIUS BROWN,
KEVIN MATOCHA, PETER MICAH SANDVIK
and LEO LOMBARDO

Appeal 2008-1429
Application 10/412,215
Technology Center 2800

Decided: June 23, 2008

Before EDWARD C. KIMLIN, BRADLEY R. GARRIS, and KAREN M.
HASTINGS, *Administrative Patent Judges*.

KIMLIN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1-5, 7, 9, 10, 13, 14, 16-23, and 25. Claim 1 is illustrative:

1. An ultraviolet sensor for monitoring energy in predetermined wavelengths for sterilizing microorganisms, the sensor comprising:

an ultraviolet photodetector sensitive to a broad range of ultraviolet light; and

a filter disposed in a position to intercept light directed toward the ultraviolet photodetector, the filter being configured to block light at wavelengths outside of said predetermined wavelengths, wherein the filter is formed as an integral component of the ultraviolet photodetector by being deposited as a topmost layer on the ultraviolet photodetector,

a responsivity of the combined ultraviolet photodetector and filter corresponding to an effectiveness of ultraviolet sterilization of microorganisms specific to a particular medium.

The Examiner relies upon the following references as evidence of obviousness:

Hillman	4,336,223	Jun. 22, 1982
Bridgen	4,629,896	Dec. 16, 1986
Hayes	5,514,871	May 7, 1996
Petersen	6,057,917	May 2, 2000
Brown	US 2001/0009268 A1	Jul. 26, 2001
Knapp	6,587,264 B2	Jul. 1, 2003

Appellants' claimed invention is directed to an ultraviolet sensor that monitors energy for sterilizing microorganisms. The sensor comprises an ultraviolet photodetector which is sensitive to a broad range of ultraviolet light and a filter deposited on the photodetector as a top most layer. The filter is an integral component of the ultraviolet photodetector.

The appealed claims stand rejected under 35 U.S.C. § 103(a) as follows:

(a) claims 1-3, 7, 9, 10, 13, 14, 16-19, 22, and 25 over Hayes in view of Bridgen, Knapp, and Brown,

(b) claims 4 and 5 over the stated combination of references in (a) above further in view of Petersen,

(c) claims 20, 21, and 23 over the combination of references stated in (a) above further in view of Hillman.

We have carefully reviewed each of Appellants' arguments for patentability. However, we find ourselves in complete agreement with the Examiner's reasoned analysis and application of the prior art, as well as his cogent disposition of the arguments raised by Appellants. Accordingly, we will adopt the Examiner's reasoning as our own in sustaining the rejections of record, and we add the following for emphasis only.

At the outset, we note that Appellants have not separately argued any particular claim on appeal. Also, Appellants have not advanced separate substantive arguments for the Examiner's separate § 103 rejections of claims 4-5, and 20, 21, and 23 (*see* Principal Br. 17). Accordingly, all the appealed claims stand or fall together with claim 1 and we will focus our consideration of the present appeal on the Examiner's rejection of claim 1.

There is no dispute that Hayes, like Appellants, discloses an ultraviolet sensor for monitoring energy in predetermined wavelengths for sterilizing microorganisms comprising an ultraviolet photodetector sensitive to a broad range of ultraviolet light and a filter disposed in a position to intercept light directed toward the ultraviolet photodetector, wherein the filter is configured to block light at wavelengths outside of the predetermined wavelengths.

The principal argument presented by Appellants is that "the Hayes patent lacks an integrated filter" (Principal Br. 14, first para.). Appellants restate in the Reply Brief that "the Hayes patent does not disclose an integrated filter" (page 2, first para.). However, Hayes specifically discloses "optical filter 110 and photodiode sensor 120 as being integral in radiation

sensor 100" and that such integral configuration is the preferred one (col. 3, ll. 29 et seq.).

While the Examiner acknowledges that Hayes does not teach that the filter is deposited as a topmost layer on the ultraviolet photodetector, we fully concur with the Examiner that Knapp and Brown evidence the obviousness of depositing the filter on the photodetector, with the filter of Knapp being the topmost layer. Knapp, in relevant part, discloses that "[i]n a particularly preferred embodiment, optical coatings are directly deposited upon the photodiode surface itself, which provides particularly substantial cost savings" (col. 3, ll. 12-15). Although Knapp teaches that other configurations may be used, the reference explicitly states that "[t]he greatest cost savings is obtained when the optical coatings are deposited directly upon the photodiode surface without the use of the discrete UV transparent substrate" (col. 4, ll. 48-51). Accordingly, notwithstanding Appellants' argument to the contrary, we agree with the Examiner that Knapp and Brown would have provided ample motivation for one of ordinary skill in the art to deposit the filter of Hayes upon the photodetector.

Appellants also maintain that "the integrated filter in the Brown publication is covered with a passivation layer" (Principal Br. 15, second para.). However, we agree with the Examiner that one of ordinary skill in the art would have understood, based on the Knapp disclosure, that the benefit of depositing the filter on the photodetector of Hayes would be realized without also including the passivation layer of Brown.

Appellants also submit that the claimed invention satisfies a long-felt need and cite a document from the *National Institute of Standards and Technology (NIST)*. According to Appellants, the objective analysis

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provided by the document characterizes tested sensors as not meeting certain required specifications for water purification. However, the relevance of this document escapes us inasmuch as Appellants have failed to provide the requisite nexus between the sensors referenced in the publication document and the sensors disclosed by the prior art cited by the Examiner.

As a final point, we note that Appellants base no argument upon objective evidence of unexpected results, which would serve to rebut the inference of obviousness established by the applied prior art.

In conclusion, based on the foregoing and the reasons well stated by the Examiner, the Examiner's decision rejecting the appealed claims 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)(effective Sept. 13, 2004).

AFFIRMED

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