The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 25

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte PETER J. JANSSEN, GEORGE A. MELNIK, SERGEI Y. YAKOVENKO, VICTOR A. KONOVALOV, and ANATOLI A. MURAVSKI

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Appeal No. 2003-0269
Application No. 09/313,547

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ON BRIEF

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Before GARRIS, LIEBERMAN, and MOORE, Administrative Patent Judges.

GARRIS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the final rejection of claims 14-25 which are all of the claims remaining in the application.

The subject matter on appeal relates to an electro-optic image display device. With reference to the appellants' drawing,

the device comprises first and second substrates (10,22) with a layer of electro-optic material therebetween, and in order from the surface of the respective substrate toward the layer of electro-optic material, first and second electro-chemically interactive layers (12,20), first and second barrier layers (24,26) of a relatively non-reactive material, and first and second orienting layers (14,18), wherein the first electro-chemically interactive layer comprises a first layer of electrically conductive material patterned to form an array of reflective electrodes defining an array of pixel elements. According to the appellants' specification disclosure, the barrier layers reduce or eliminate DC offset and associated flicker which would otherwise arise due to an electro-chemical interaction between the interactive layers and the orientation layers when such devices are driven with an AC waveform (e.g., see the Abstract and the "OBJECTS AND SUMMARY OF THE INVENTION" section of the appellants' specification). This appealed subject matter is adequately illustrated by independent claim 14 which reads as follow:

> 14. An electro-optic image display device comprising a layer of an electro-optic material between first and second substrates, the first and second substrates supporting, on a respective side of each respective substrate facing the layer of electro-optic material, in order from the surface of the respective substrate toward the layer of electro-optic material:

first and second electro-chemically interactive layers, respectively, of an electro-chemically interactive material;

first and second barrier layers, respectively, of a relatively non-reactive material; and

first and second orienting layers, respectively, of orienting material,

the first electro-chemically interactive layer comprising a first layer of electrically conductive material patterned to form an array of reflective electrodes defining an array of pixel elements.

The prior art set forth below is relied upon by the examiner as evidence of obviousness:

Tsai et al. (Tsai) 5,808,715 Sep. 15, 1998

The admitted prior art described on pages 9-11 of the specification and shown in Figure 1 of the drawing of this application.

All of the claims on appeal stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the admitted prior art in view of Tsai. On page 4 of the final Office action (i.e., Paper No. 14), the examiner describes his position as follows:

> As explained above the admitted prior art described in the present invention [sic, specification] discloses the claimed invention except that a barrier layer of relatively non-reactive material is formed between the orientation layer and the electrode. However, Tsai discloses in column 1, lines 51-59 that since the entering external conductive impurities with the size equal to or larger than the gap between the upper and lower electrodes may cause a short circuit, an overcoat (applicant's barrier layer) made of oxide or nitride (such as SiO2, TiO2 or Si3N4 [sic]) must be formed between the ITO layer (applicant's electro-

> chemically interactive material) and the aligning layer (applicant's orientation layer). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to insert a barrier layer of relatively non reactive material in between the electrode and the orientation layer in order to prevent short circuit between the electrodes.

We refer to the brief and reply brief and to the answer for a complete exposition of the opposing viewpoints expressed by the appellants and by the examiner concerning the above noted rejection.

OPINION

For the reasons which follow, this rejection cannot be sustained.

In order to establish a prima facie case of obviousness within the meaning of 35 U.S.C. 103(a), the applied prior art must provide a suggestion for the modification proposed by the examiner and a reasonable expectation that the proposed modification would be successful. In re O'Farrell, 853 F.2d 894, 903-04, 7 USPQ2d 1673, 1680-81 (Fed. Cir. 1988).

Here, the prior art applied by the examiner provides neither the requisite suggestion nor reasonable expectation of success. This is because no evidence exists that the overcoat or barrier layer teaching of Tsai would have been considered by an artisan to be relevant to a problem or any other such characteristic

possessed by the admitted prior art. As indicated in the above quotation, the examiner believes it would have been obvious to provide the admitted prior art with barrier layers "in order to prevent short circuit between the electrodes" (final Office action, page 4) pursuant to the teachings of Tsai.

However, the examiner points to nothing (and we find nothing) in the record before us to support a determination that the admitted prior art possesses the short circuit problem caused by impurities which is present in the liquid crystal display devices of Tsai. It is apparent, therefore, that the rejection advanced on this appeal is grounded upon the examiner's implicit assumption that the applied prior art possesses the problem addressed and solved by Tsai. This circumstance is fatal to the examiner's obviousness position since it is well settled that a section 103 rejection must rest on a factual basis rather than assumption. See In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968).

For the reasons set forth above, we agree with the appellants that the only motivation for providing the admitted prior art with barrier layers is derived from the appellants' own disclosure. Thus, the most fundamental deficiency of the rejection under review is that it is based upon impermissible

hindsight. See W.L. Gore & Assocs. v. Garlock, Inc., 721 F.2d 1551, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). It follows that we cannot sustain the examiner's section 103 rejection of claims 14-25 as being unpatentable over the admitted prior art in view of Tsai.

The decision of the examiner is reversed.

REVERSED

Bradley R. Garris Administrative Patent Judge	)	
Paul Lieberman Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
James T. Moore Administrative Patent Judge	)	

BRG:tdl

Corporate Patent Counsel
US Philips Corporation
580 White Plains Road
Tarrytown, NY 10591