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D E C I S I O N
of 19 November 1998

Case Number: T 0208/98 - 3.4.2

Application Number: 89106561.7

Publication Number: 0338412

IPC: G02F 1/133

Language of the proceedings: EN

Title of invention:

Color liquid crystal display device and method for driving
same

Patentee:

Asahi Glass Company Ltd

Opponent:

Canon Kabushiki Kaisha

Headword:

-

Relevant legal provisions:

EPC Art. 123, 56

Keyword:

"Inventive step (yes, after amendment)"

Decisions cited:

-

Catchword:

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Boards of Appeal

Chambres de recours

Case Number: T 0208/98 - 3.4.2

D E C I S I O N
of the Technical Board of Appeal 3.4.2
of 19 November 1999

Appellant: Asahi Glass Company Ltd
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 19 January 1998
revoking European patent No. 0 338 412 pursuant
to Article 102(1) EPC.

Composition of the Board:

Chairman: E. Turrini
Members: A. G. Klein
V. Di Cerbo

Summary of Facts and Submissions

- I. European patent No. 0 338 412 (application No. 89 106 561.7) was revoked by decision of the Opposition Division.
- II. The appellant (proprietor of the patent) filed an appeal against the decision revoking the patent.
- III. Following two communications of the Board of Appeal, the appellant on 28 September 1999 and 21 October 1999 filed amended patent documents on the basis of which he requested that the patent be maintained (main request).

Claims 1 and 10, the only independent claims of the set of claims of the appellant's main request read as follows:

"1. A liquid crystal color display device comprising a display region (1; 21) and a peripheral region (5; 25) around the display region (1; 21), said display region (1; 21) having light shielding layers (4; 24) and color filters (3; 23) on the inner surface of a cell and mutually opposed groups of electrodes (10) to perform display, characterized in that

- (a) said display device is a dot matrix type with said color filters (3; 23) being formed in pixel portions;
- (b) said display device is of an STN type being capable of black and white display;
- (c) said light shielding layers (6; 26) in said display region (1; 21) being disposed in mutual partial overlap with said pixel portions of said color filters (3; 23), while

(d1) light shielding layers (6; 26) being disposed over the entire surface of said peripheral region (5;25), and

(d2) color filters (7; 27) similar to those of the display region (1; 21) being also disposed in said peripheral region (1; 21).

10. A method for using the liquid crystal color display device defined in Claims 1 to 9, wherein a back light is provided on the reverse side of the device for enabling said device to function as a negative type."

IV. The respondent (opponent) in his letter of 7 October 1999 indicated that he had no objection to the opposed patent being maintained in accordance with the new appellant's main request.

V. On both parties' request, the oral proceedings which were due to take place on 28 October 1999 were cancelled on 21 October 1999.

Reasons for the Decision

1. The appeal is admissible.
2. The Board having duly scrutinized the documents on file is satisfied that the patent as amended in accordance with the appellant's main request - which no longer encompasses the variant, considered obvious by the Opposition Division, with the shielding layers being arranged in the same manner in the peripheral and in the display regions - satisfies the requirements of the

Convention.

The reasons therefore will only be summarized shortly in the following, since the respondent no longer objects to the allowability of the appellant's main request.

2.1 Compliance of the amendments with the requirements of Article 123(2) and (3) EPC.

Independent claim 1 corresponds in substance to claim 1 as granted, with the further limitations set out in features (a) to (d1) which were adequately disclosed in the description as originally filed (see e.g. page 13, line 14 to page 14, line 11 in connection with Figure 1 and page 7, lines 16 to 23).

Independent claim 10 defines a method for using the device of claim 1, with the additional limitation set out in claim 15 as originally filed.

The description was adapted for consistency with the amended claims.

Thus the patent documents in accordance with the appellant's main request meet the requirements of Article 123(2) and (3) EPC.

2.2 *Patentability*

The claimed subject-matter is novel within the meaning of Article 54 EPC, since none of the pieces of prior art brought to light in the file discloses a liquid crystal colour display device comprising a display

region and a peripheral region, with light shielding layers being disposed over the entire surface of the peripheral region and colour filters similar to those of the display region being also provided in the peripheral region.

Concerning the issue of inventive step, the Board agrees to the appellant's submission that the nearest prior art is disclosed in document JP-A-63-34 510 (D2), which is the sole to disclose a light shielding layer covering the entire surface of a peripheral region around the display region of a liquid crystal display device of a dot matrix type. These layers however are not provided on an inner surface of the cell, which itself does not comprise any colour filters either.

The Board has no reason to question the appellant's submission that the provision of a light shielding layer in the peripheral region, in particular for STN displays, cannot totally prevent negative influences of the peripheral region on the appearance of the display region in terms of blurring and lightened colour and that these negative influences are substantially alleviated when additional colour filters similar to those in the display are also disposed in the peripheral region, as is evidenced by the photographs attached to the appellant's letter dated 29 May 1998.

Since the peripheral region is rendered impervious to light by the presence of a light shielding layer over its entire surface, an advantageous effect of colour filters in such an opaque peripheral region could not have been expected by the skilled person in an obvious manner.

For these reasons and in the absence of any objection by the respondent, the liquid crystal colour display device of claim 1 and the method for using it as set out in independent claim 10 are considered to involve an inventive step within the meaning of Article 56 EPC.

The same conclusion applies to the subject-matter of claims 2 to 9, by virtue of their dependency to claim 1.

3. Since the patent as amended in accordance with the appellant's main request, and the invention to which it relates thus meet the requirements of the Convention, the patent can be maintained as so amended (see Article 102(3) EPC).

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the first instance with the order to maintain the patent as amended in the following version:

Claims: No. 1 to 10 as filed with the appellant's letter dated 28 September 1999.

Description: pages 2, 3, 5, 10 and 11 as filed with the appellant's letter dated

28 September 1999 and pages 4, 6 to 9 and 12 as filed with the appellant's letter dated 21 October 1999.

Drawings:

Sheets 1/2 to 2/2 (Figures 1 to 3) as filed with the appellant's letter dated 28 September 1999.

The Registrar:

The Chairman:

P. Martorana

E. Turrini