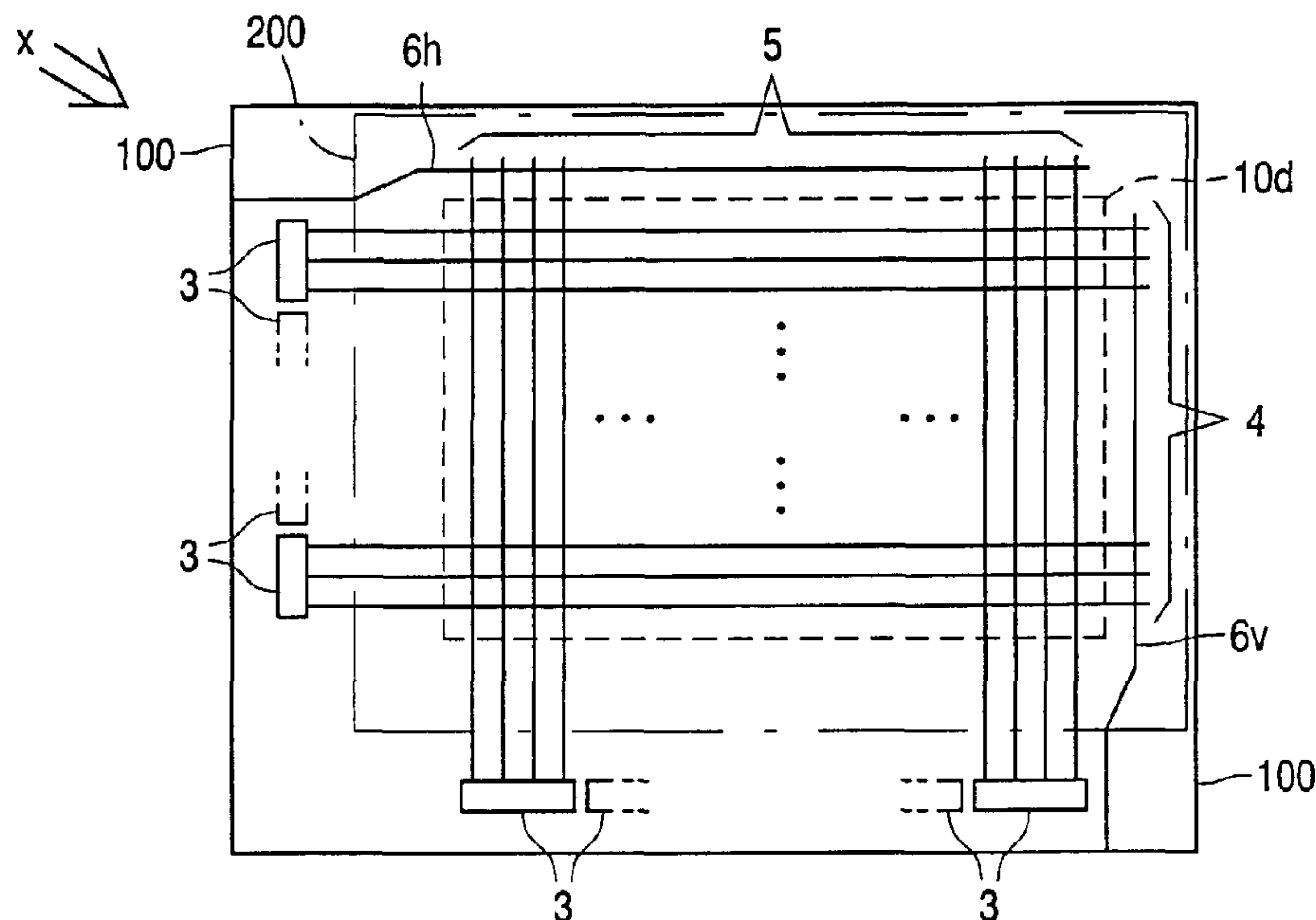




(86) Date de dépôt PCT/PCT Filing Date: 2001/11/29
(87) Date publication PCT/PCT Publication Date: 2002/06/13
(85) Entrée phase nationale/National Entry: 2002/08/06
(86) N° demande PCT/PCT Application No.: EP 2001/014212
(87) N° publication PCT/PCT Publication No.: 2002/046833
(30) Priorité/Priority: 2000/12/07 (00/372358) JP

(51) Cl.Int.⁷/Int.Cl.⁷ G02F 1/13
(71) Demandeur/Applicant:
KONINKLIJKE PHILIPS ELECTRONICS N.V., NL
(72) Inventeur/Inventor:
HASHIMOTO, KAZUYA, NL
(74) Agent: FETHERSTONHAUGH & CO.

(54) Titre : DISPOSITIF D'AFFICHAGE A CRISTAUX LIQUIDES COMPRENANT UN CABLAGE AUXILIAIRE
(54) Title: LIQUID CRYSTAL DISPLAY DEVICE HAVING AN AUXILIARY WIRING



(57) **Abrégé/Abstract:**

To enable freely choose a bus-line to be monitored without such a problem that the bus-line is made corroded. A liquid crystal display device comprising: a substrate (10) in which a display area (10d) is delimited; and two series of bus-lines (4, 5) supported by the substrate, one ends of the bus-lines being located in proximity to one side of the display area, another ends of the bus-lines being located in proximity to another side of the display area which is opposite to the one side of the display area, the two series of bus-lines (4, 5) being arranged to extend over the display area in such a manner that the one series of bus-lines (4) is orthogonal to the other series of bus-lines (5). The display device further comprises: a conductive auxiliary wiring pattern (6h, 6v) which extends in such a manner that the pattern crosses another end(s) of the bus-line(s), which is/are all to be monitored, of the one series of bus-lines (4 or 5) via an electrically insulating layer (7), and which is led out to a predetermined location on a side of one ends of the bus-lines (5 or 4) of the other series to form a coupling portion (6p) capable of electrically connecting to the exterior.



(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



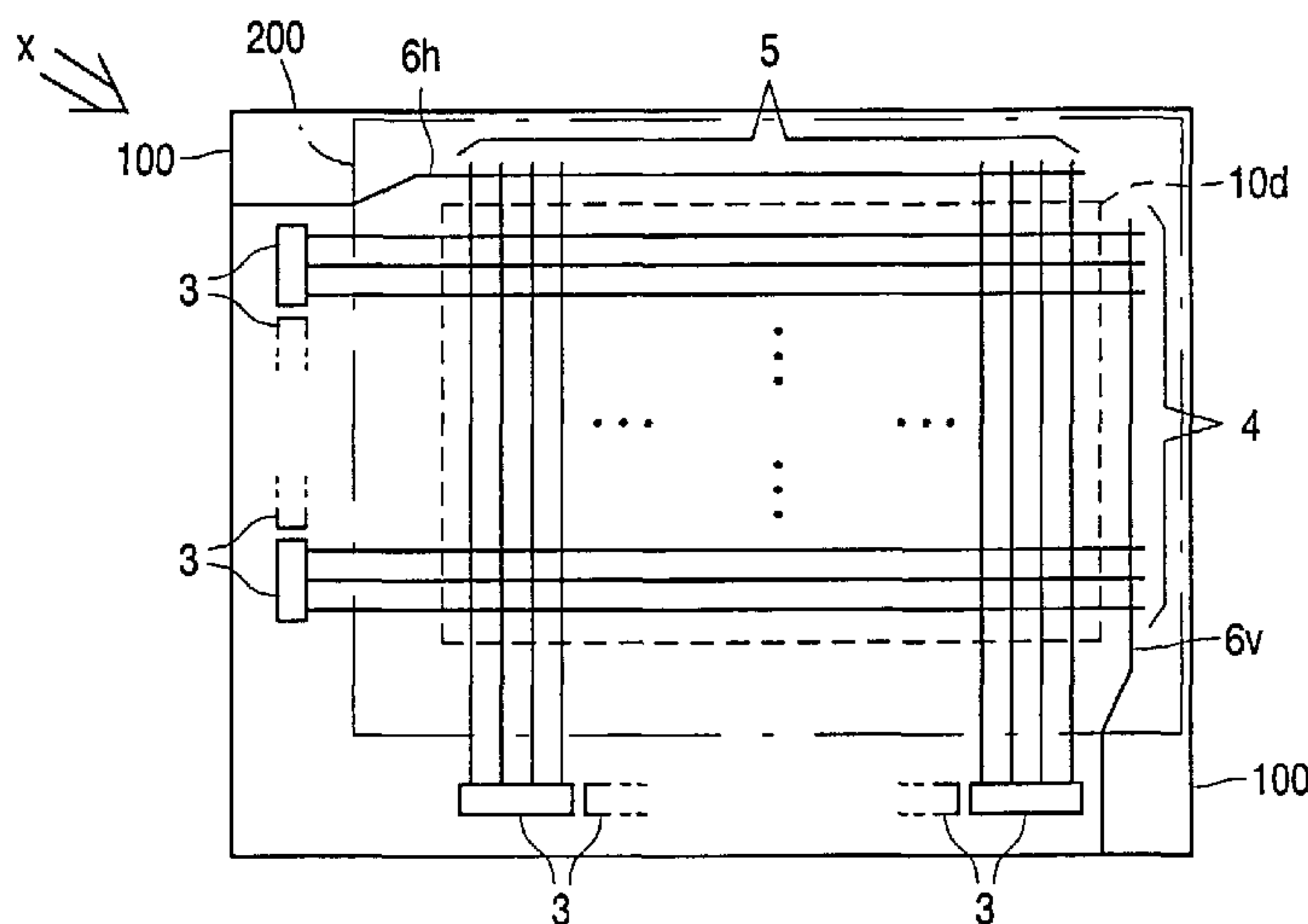
(43) International Publication Date
13 June 2002 (13.06.2002)

PCT

(10) International Publication Number
WO 02/46833 A2

- (51) International Patent Classification⁷: **G02F 1/13** (72) Inventor: **HASHIMOTO, Kazuya**; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).
- (21) International Application Number: PCT/EP01/14212 (74) Agent: **RAAP, Adriaan, Y.**; Internationaal Octrooibureau B.V., Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).
- (22) International Filing Date: 29 November 2001 (29.11.2001) (81) Designated States (*national*): AU, BR, CA, CN, KR, NZ.
- (25) Filing Language: English (84) Designated States (*regional*): European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR).
- (26) Publication Language: English
- (30) Priority Data: 00/372358 7 December 2000 (07.12.2000) JP
- (71) Applicant: **KONINKLIJKE PHILIPS ELECTRONICS N.V.** [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- Published:**
— without international search report and to be republished upon receipt of that report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: LIQUID CRYSTAL DISPLAY DEVICE HAVING AN AUXILIARY WIRING



(57) Abstract: To enable freely choose a bus-line to be monitored without such a problem that the bus-line is made corroded. A liquid crystal display device comprising: a substrate (10) in which a display area (10d) is delimited; and two series of bus-lines (4, 5) supported by the substrate, one ends of the bus-lines being located in proximity to one side of the display area, another ends of the bus-lines being located in proximity to another side of the display area which is opposite to the one side of the display area, the two series of bus-lines (4, 5) being arranged to extend over the display area in such a manner that the one series of bus-lines (4) is orthogonal to the other series of bus-lines (5). The display device further comprises: a conductive auxiliary wiring pattern (6h, 6v) which extends in such a manner that the pattern crosses another end(s) of the bus-line(s), which is/are all to be monitored, of the one series of bus-lines (4 or 5) via an electrically insulating layer (7), and which is led out to a predetermined location on a side of one ends of the bus-lines (5 or 4) of the other series to form a coupling portion (6p) capable of electrically connecting to the exterior.



WO 02/46833 A2

