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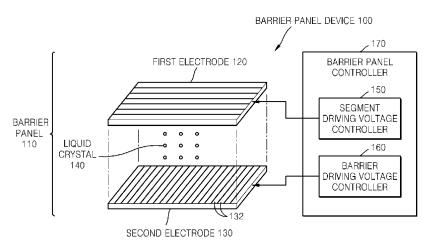
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(54) Title: BARRIER PANEL DEVICE FOR 3D IMAGE REPRODUCTION, AND METHOD OF DRIVING SAME

FIG. 1



(57) Abstract: Provided is a method of driving a barrier panel device. Segment driving voltages are controlled to be applied to a plurality of segments of a first electrode of a barrier panel based on a display direction of an image signal displayed on an image display panel of an apparatus for reproducing a 3D image. An odd barrier driving voltage is controlled to be commonly applied to odd numbered barriers of a plurality of barriers of a second electrode of the barrier panel. An even barrier driving voltage is controlled to be commonly applied to even numbered barriers of the plurality of barriers. The segment driving voltage, the odd barrier driving voltages, and the even barrier driving voltages are synchronized.



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Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) eKOMPASS(KIPO internal) & Keywords: 3D, stereoscopy, stereography, barrier, liquid, crystal and similar terms

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|---|-----------------------------------|
| X A | KR 10-0846707 B1 (SEONG CHEOL HAN. et al.) 16 JULY 2008 See paragraph 68-92, and Figures 11-12. | 1-2,9-11,20-22,24 3-8,12-19,23 |
| X A | US 2006-0126177 A1 (BEOM SHIK KIM et al.) 15 JUNE 2006 See paragraph 37-53, and Figures 1-2B. | 1 2-14 |
| A | KR 10-0831017 B1 (BEOM SHIK KIM et al.) 20 MAY 2008 See paragraph 37-70, and Figures 4,8. | 1-24 |
| A | US 2007-0103547 A1 (BEOM SHIK KIM et al.) 10 MAY 2007 See paragraph 52-61, 77-79, 103-105, and Figures 1,2,6,10. | 1-24 |
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|--|------------------|--|--|
| KR 10-0846707 B1 | 16.07.2008 | US 2008-0204368 A1 | 28.08.2008 |
| US 2006-0126177 A1 | 15.06.2006 | CN 1784022 A EP 1662808 A1 JP 2006-154809 A KR 10-0786862 B1 KR 20060060102A | 07.06.2006 31.05.2006 15.06.2006 20.12.2007 05.06.2006 |
| KR 10-0831017 B1 | 20.05,2008 | KR 10-0879298 B1 US 2008-0218459 A1 | 19.01.2009 11.09.2008 |
| US 2007-0103547 A1 | 10.05.2007 | CN 1960503 A EP 1784026 A1 EP 1784026 A8 JP 2007-128027 A KR 10-0728115 B1 KR 20070048355A | 09.05.2007 09.05.2007 08.08.2007 24.05.2007 13.06.2007 09.05.2007 |