

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Tianma Microelectronics Co. Ltd.,

Petitioner

v.

Japan Display Inc.,

Patent Owner

Patent No. 9,310,654
Filing Date: November 20, 2014
Issue Date: April 12, 2016

Title: LIQUID CRYSTAL DEVICE AND ELECTRONIC APPARATUS

Case No. IPR2021-01029

PETITION FOR *INTER PARTES* REVIEW

TABLE OF CONTENTS

I.	PRELIMINARY STATEMENT	1
II.	OVERVIEW OF '654 PATENT	3
A.	Challenged Claims	3
1.	Independent Claim 1	3
2.	Independent Claim 14	5
B.	The claims of the '654 patent are not entitled to any priority date earlier than November 20, 2014	8
1.	Legal requirement for determining entitlement to priority to prior-filed application	8
2.	None of the five disclosed embodiments in the Parent Application contain the features of Alternative A	10
3.	The disclosed embodiments cannot be combined to provide written description.	12
4.	The Japanese applications incorporated by the Parent Application by reference cannot provide written description support for the claims of the '654 patent.	13
III.	<i>ATARASHIYA</i> DISCLOSES SECOND ALTERNATIVE BUT NOT THE FIRST ALTERNATIVE	14
IV.	LEVEL OF ORDINARY SKILL	18
V.	CLAIM CONSTRUCTION	18
VI.	STATEMENT OF PRECISE RELIEF REQUESTED FOR EACH CLAIM CHALLENGED	19
VII.	THE BOARD SHOULD NOT EXERCISE DISCRETION TO DENY INSTITUTION UNDER 35 U.S.C. § 314	19

VIII. CLAIMS 1-7 and 12-14 OF THE '654 PATENT ARE UNPATENTABLE BECAUSE THEY ARE ANTICIPATED BY *ATARASHIYA*26

A. Claim 127

1. Element [1.0]: *Atarashiya* discloses “[a] liquid crystal device.”27

2. Element [1.1]: *Atarashiya* discloses “a first substrate and a second substrate that are disposed to face each other, the first substrate including a plurality of data lines and a plurality of scan lines which intersect each other.”27

3. Element [1.2]: *Atarashiya* discloses “a liquid crystal layer that is sandwiched between the first substrate and the second substrate.”29

4. Element [1.3]: *Atarashiya* discloses “a first electrode that is provided on a liquid crystal layer side of the first substrate.”30

5. Element [1.4]: *Atarashiya* discloses “an insulating layer that is provided on the liquid crystal layer side of the first electrode.”31

6. Element [1.5]: *Atarashiya* discloses “a second electrode that is provided on the liquid crystal layer side of the insulating layer.”32

7. Element [1.6]: *Atarashiya* discloses “a light shielding film configured to overlap with at least one of the data lines or at least one of the scan lines which is at least bent in plan view, the light shielding film being provided on the second substrate.”33

8. Element [1.7]: *Atarashiya* discloses “sub-pixels are formed at regions surrounded by the data lines and the scan lines.”35

9.	Element [1.8]: <i>Atarashiya</i> discloses “the second electrode has a plurality of linear electrodes that are disposed with gaps therebetween.”	36
10.	Element [1.9]: <i>Atarashiya</i> discloses “each of the plurality of linear electrodes extends in a long-axis direction of the sub-pixels, and at least one of the linear electrodes or at least one of the gaps has at least one bent portion, the bent portion provided in a central portion of the respective sub-pixels.”	38
11.	Element [1.10]: <i>Atarashiya</i> discloses “the bent portion has such a shape that both sides thereof are inclined in opposite directions with respect to the long-axis direction of the sub-pixels.”	39
12.	Element [1.11]: <i>Atarashiya</i> discloses “the data lines or the scan lines are bent in an extending direction of the linear electrodes having the bent portion.”	40
13.	Element [1.12 and 1.12.b]: <i>Atarashiya</i> discloses “wherein the first and second electrodes are a combination of . . . a common electrode as the second electrode including the linear electrodes and gaps, and that is provided over a pixel electrode as the first electrode.”	42
14.	Element [1.13]: <i>Atarashiya</i> discloses “wherein the light shielding film is configured to overlap with the second electrode which is bent in plan view.”	43
B.	Claim 2: <i>Atarashiya</i> discloses “The liquid crystal device according to claim 1, wherein each of the plurality of linear electrodes is linearly symmetric about a short-axis direction of the bent portion.”	45
C.	Claim 3	46
1.	Element [3.1]: <i>Atarashiya</i> discloses “The liquid crystal device according to claim 1, wherein two adjacent linear electrodes include a bent portion.”	46

2.	Element [3.2]: <i>Atarashiya</i> discloses “wherein a region disposed between the bent portions of said two linear electrodes in a short-axis direction of the sub-pixels is one of the gaps that is between the two adjacent linear electrodes.”	48
D.	Claim 4	48
1.	Element [4.1]: <i>Atarashiya</i> discloses “The liquid crystal device according to claim 1, wherein two adjacent linear electrodes include a bent portion.”	48
2.	Element [4.2]: <i>Atarashiya</i> discloses “wherein a connection portion is provided to a region disposed between bent portions of said two linear electrodes in a short-axis direction of the sub-pixels so as to connect the two adjacent linear electrodes with each other.”	48
E.	Claim 5: <i>Atarashiya</i> discloses “The liquid crystal device according to claim 1, wherein among the plurality of linear electrodes and the gaps alternately arranged in a short-axis direction of the sub-pixels, the linear electrode and the gap disposed at a region located close to one of the bent data lines or one of the bent scan lines has a width larger than a width of the linear electrode and the gap disposed at a region located distant from said bent data line or said bent scan line.”	51
F.	Claim 6: <i>Atarashiya</i> discloses “The liquid crystal device according to claim 1, wherein among the linear electrodes arranged in a short-axis direction of the sub-pixels, the linear electrode disposed at a region located close to one of the bent data lines or one of the bent scan lines has a width larger than a width of the linear electrode disposed at a region located distant from said bent data line or said bent scan line.”	54
G.	Claim 7: <i>Atarashiya</i> discloses “The liquid crystal device according to claim 1, wherein among a plurality of the gaps arranged in a short-axis direction of the sub-pixels, the gap disposed at a region located close to one of the bent data lines or one of the bent scan lines has a width larger than a width of	

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.