

NOTE: This disposition is nonprecedential.

**United States Court of Appeals
for the Federal Circuit**

**THOMSON LICENSING SAS, AND THOMSON
LICENSING, LLC,**
Appellants,

v.

INTERNATIONAL TRADE COMMISSION,
Appellee,

AND

**QISDA CORPORATION, QISDA AMERICA
CORPORATION, QISDA (SUZHOU) CO., LTD.,
BENQ CORPORATION, BENQ AMERICA
CORPORATION, AND BENQ LATIN AMERICA
CORPORATION,**
Intervenors,

AND

**AU OPTRONICS CORPORATION, AND AU
OPTRONICS CORPORATION AMERICA,**
Intervenors,

AND

**CHIMEI INNOLUX CORPORATION, INNOLUX
CORPORATION, AND CHI MEI
OPTOELECTRONICS USA INC.,**

Intervenors.

2012-1536

Appeal from the United States International Trade Commission in Investigation Nos. 337-TA-741 and 337-TA-749.

Decided: June 19, 2013

STEVEN C. CHERNY, Kirkland & Ellis, LLP, of New York, New York, argued for appellant. With him on the brief were TODD M. FRIEDMAN and JAMES E. MARINA; ERIC R. LAMISON, of San Francisco, California; DENNIS J. ABDELNOUR, of Chicago, Illinois; JOHN C. O'QUINN and WILLIAM H. BURGESS, of Washington, DC. Of counsel was DANIEL S. TRAINOR, of Washington, DC.

JIA CHEN, Attorney, Office of General Counsel, United States International Trade Commission, of Washington, DC, argued for appellee. With her on the brief were DOMINIC L. BIANCHI, Acting General Counsel, and WAYNE W. HERRINGTON, Assistant General Counsel.

LAWRENCE J. GOTTS, Latham & Watkins, LLP, of Washington, DC, argued for intervenors, AU Optronics Corporation, et al. On the brief were RON SHULMAN, of Menlo Park, California; JULIE HOLLOWAY, of San Francisco, California; and ELIZABETH M. ROESEL and KATHERINE I. TWOMEY, of Washington, DC. Of counsel were CLEMENT J. NAPLES, of Latham & Watkins, LLP, of New York, New York and LISA K. NGUYEN, Menlo Park, California.

WARREN S. HEIT, White & Case LLP, of Palo Alto, California, argued for intervenors, Chimei Innolux Corporation, et al. With him on the brief were JEANNINE YOO SANO; JACK Q. LEVER and FRANK H. MORGAN, of Washington, DC.

SUSAN M. COOK, Hogan Lovells US LLP, of Washington, DC, for intervenors, Qisda Corporation, et al. With her on the brief were STEVEN P. HOLLMAN and REBECCA C. MANDEL.

Before NEWMAN, LOURIE, and WALLACH, *Circuit Judges*.

LOURIE, *Circuit Judge*.

Thomson Licensing SAS and Thomson Licensing, LLC (“Thomson”) appeal from the final determination by the United States International Trade Commission (“Commission”) that the importation and sale of certain liquid crystal display (“LCD”) products do not violate § 337 of the Tariff Act of 1930 as amended, 19 U.S.C. § 1337. The Commission determined that the asserted claims of U.S. Patent 5,978,063 (the “’063 patent”) and 5,648,674 (the “’674 patent”) were invalid as anticipated or obvious. Specifically, the Commission: (1) denied Thomson’s request for an exclusion order on products infringing the ’063 and ’674 patents; (2) held claims 1, 2, 3, 4, 8, 11, 12, 14, and 18 of the ’063 patent invalid as obvious over two references; and (3) found claims 1, 7, 8, 9, 11, 13, 14, 16, 17, and 18 of the ’674 patent invalid as anticipated or obvious over one reference. *In re Certain Liquid Crystal Display Devices*, Nos. 337-TA-741, -749 (ITC June 14, 2012) (“*Commission Opinion*”). Because the Commission did not err in finding the asserted claims anticipated or obvious, we *affirm*.

BACKGROUND

Thomson owns the '063 and '674 patents, which pertain to LCD panel components and manufacturing methods for those components. '063 patent col. 2 ll. 36–44; '674 patent col. 1 ll. 16–42. The basic components of an active matrix LCD consist of a thin layer of liquid crystal sandwiched between a pair of glass substrates, each substrate having a polarizer and a set of electrodes affixed to its surface. *Commission Opinion* at 26. Spacers made of glass or plastic are employed to keep the gap between the two glass substrates uniform. *Id.* at 26–27. These spacers can be placed or formed in the non-transmissive or non-active area of the glass substrate. *Id.* at 27. During the LCD assembly process, the bottom substrate is mechanically rubbed to align the liquid crystal molecules. '063 patent col. 4 ll. 30–32, fig 9. This rubbing process can be harsh enough to damage spacers that are already on the bottom substrate. *Id.* col. 4 ll. 34–35.

The '063 patent claims spacers that can withstand the mechanical rubbing process, which is done after they are formed and in the direction of the long axis, because they are anisotropically shaped (*i.e.*, their length is greater than their width). *Id.* col. 4 ll. 30–37.

Exemplary claim 11 recites:

A method of forming a display cell comprising:

providing a first substrate which has been partitioned into an active and a non-active area and has a front surface and a rear surface;

forming a *plurality of spacing elements* separate from one another on the front surface and non-active areas of said first substrate, *the spacing elements being anisotropic in shape*;

mechanically rubbing over the first surface having the plurality of spacing elements formed thereon; and

attaching a second substrate on the front surface of said first substrate, said second substrate being kept at a substantially uniform distance from said first substrate by said spacing elements.

Id. col. 6 ll. 11–24 (emphases added).

The '674 patent claims thin-film transistors used in the bottom glass substrate of an LCD to control the voltage applied to the liquid crystal. The disclosed transistor has a structure in which a drain electrode and a supplemental capacitor electrode are on a single metal layer allowing for decreased manufacturing costs and thinner LCD panels. *See* '674 patent col. 3 ll. 32–37.

On October 18, 2010, the Commission instituted two § 337 investigations based on complaints filed by Thomson which alleged violations of § 337 owing to infringement of claims of various patents, including the '063 and '674 patents. *In re Certain Liquid Crystal Display Devices*, 75 Fed. Reg. 63856 (Oct. 18, 2010). These investigations were consolidated in December 2010. *Commission Opinion* at 4. With the '063 and '674 patents, the investigation proceeded against: Qisda Corp., Qisda America Corp., Qisda Ltd., BenQ Corp., BenQ America Corp., and BenQ Latin America Corp. (collectively “Qisda”); AU Optronics Corp. and AU Optronics Corp. of America (collectively “AUO”); and ChiMei Innolux Corp., Innolux Corp., and Chi Mei Optoelectronics USA, Inc. (collectively “CMI”). The investigation focused on whether importation of those companies’ LCD products and components infringed the asserted claims of the '063 and '674 patents.

Before the Administrative Law Judge (“ALJ”), Qisda, AUO, and CMI (collectively “Intervenors”) argued that the

asserted claims of the '063 patent were obvious over U.S. Patent 4,568,149 ("Sugata") in view of U.S. Patent 4,775,225 ("Tsuboyama"). *Id.* at 54. Sugata discloses anisotropic spacers on an LCD panel's glass substrate along the non-active area. Sugata col. 5 ll. 34–40. Sugata also describes rubbing but does not disclose whether it occurs before or after the spacers are formed. *Id.* col. 4 ll. 38–45. Tsuboyama is directed to spacers formed on a glass substrate followed by mechanical rubbing of that substrate. Tsuboyama col. 2 ll. 34–46.

Regarding the '674 patent, CMI argued that the asserted claims were anticipated by and obvious over a Japanese patent application, JP 06-130415A ("Fujitsu"), which discloses a method for manufacturing components of an LCD device. Fujitsu discloses manufacturing these components using staggered thin film transistors created on three metal layers. Fujitsu at 2, fig. 3 (translation available at J.A. 22421, J.A. 22430 fig. 3).

After an evidentiary hearing, the ALJ issued an initial determination finding: (1) no violation of § 337 as to the '063 patent and that all of the asserted claims but claim 17 of that patent were obvious over Sugata in view of Tsuboyama. *Commission Opinion* at 5. Regarding the '674 patent, the ALJ found CMI and Qisda in violation of § 337 due to infringement of ten asserted claims. *Id.*

On review the Commission found no violation as to either patent. Regarding the '063 patent, the Commission ruled that: (a) AUO and Qisda infringed claims 11, 12, 14, 17, and 18 but not claims 1, 2–4, and 8, *id.* at 44–54; (b) CMI did not infringe any claims, *id.*; and (c) all ten asserted claims were obvious over Sugata in view of Tsuboyama, *id.* at 63. The Commission agreed with the ALJ that Sugata discloses every limitation of the '063 patent's asserted claims, including anisotropic spacers and mechanical rubbing during the manufacturing process, but concluded that Sugata did not specify when the mechani-

cal rubbing occurred. *Id.* at 56. The Commission further found that Tsuboyama discloses anisotropic spacers that are mechanically rubbed along their long axis after formation. *Id.* Finally, the Commission found that “one of ordinary skill in the art would be motivated to combine the references to arrive at the claimed invention” based on their common goal of providing spacing elements in a liquid crystal display. *Id.* at 59.

Regarding the ’674 patent, the Commission found that CMI and Qisda infringed asserted claims 1, 7–9, 11, 14, 16, 17, and 18, but found claims 1, 7, 8, 14, 16, 17, and 18 to be invalid as anticipated by Fujitsu, and claims 9, 11, and 13 to have been obvious over Fujitsu in view of the demonstrated knowledge of those skilled in the art. *Id.* at 81.

Thomson timely appealed. We have jurisdiction under 28 U.S.C. § 1295(a)(6).

DISCUSSION

We review the Commission’s final determinations under the standards of the Administrative Procedure Act (the “Act”). *See* 19 U.S.C. § 1337(c) (providing that “[a]ny person adversely affected by a final determination of the Commission” may appeal to this court “for review in accordance with chapter 7 of Title 5”). Under the Act, rulings of law are reviewed *de novo*, and findings of fact are reviewed for substantial evidence. *Ajinomoto Co. v. Int’l Trade Comm’n*, 597 F.3d 1267, 1272 (Fed. Cir. 2010); *Osram GmbH v. Int’l Trade Comm’n*, 505 F.3d 1351, 1355 (Fed. Cir. 2007). Substantial evidence is “such relevant evidence as a reasonable mind might accept as adequate to support a conclusion.” *Osram GmbH*, 505 F.3d at 1355 (quoting *Consol. Edison Co. v. NLRB*, 305 U.S. 197, 217 (1938)).

A claim is invalid under 35 U.S.C. § 102 if a prior art document discloses every element of the claimed inven-

tion, either expressly or inherently. *Adv. Display Sys., Inc. v. Kent State Univ.*, 212 F.3d 1272, 1282 (Fed. Cir. 2000). Anticipation under § 102 is a question of fact, which we review for substantial evidence. *Vizio, Inc. v. Int’l Trade Comm’n*, 605 F.3d 1330, 1342 (Fed. Cir. 2010). A claim is invalid for obviousness if, to one of ordinary skill in the pertinent art, “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made.” 35 U.S.C. § 103(a) (2006); *see also KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406–07 (2007). “Obviousness is a question of law based on underlying factual inquiries, and thus we review the Commission’s ultimate determination *de novo* and factual determinations for substantial evidence.” *Vizio*, 605 F.3d at 1342.

A. ’063 PATENT

Thomson argues that the Commission erred by committing “hindsight error” and improperly combined Sugata and Tsuboyama. Thomson contends that Tsuboyama discloses only a rubbing *direction*, not a rubbing *sequence*, but the Commission erroneously used the ’063 patent as a guide to bridge this gap. Finally, Thomson argues that the Commission engaged in improper burden shifting with respect to the obviousness inquiry contrary to *In re Cyclobenzaprine*, 676 F.3d 1063 (Fed. Cir. 2012).

The Commission and Intervenor respond that the Commission correctly found that a person of ordinary skill would have been motivated to combine Sugata’s teaching of anisotropic spacers with Tsuboyama’s teaching of mechanical rubbing. They further argue that the Commission properly relied on expert testimony to determine how one of skill in the art would have combined the references to arrive at the claimed invention. Intervenor argue that the Commission did not improperly shift the

burden of proof and correctly evaluated all the evidence of obviousness before coming to an ultimate conclusion.

We discern no error in the Commission's obviousness determination. Sugata teaches the use of anisotropic spacers in an LCD substrate's non-active area. *E.g.*, Sugata fig. 4(a), col. 5 ll. 34–40. Sugata also discloses mechanical rubbing, but does not specify whether this rubbing occurs before or after the spacers are formed. *Id.* col. 4 ll. 38–45. Tsuboyama discloses anisotropic spacers that are rubbed in their long axis direction after formation. Tsuboyama fig. 3B, col. 2 ll. 46–50, col. 4 ll. 49–51. Tsuboyama states that anisotropic spacers are on an insulating film that is later “subjected to a uniaxial orientation treatment (rubbing, etc.) in the [long axis direction].” *Id.* col. 4 ll. 43–51. Although the direction of the rubbing is specified, the patent discloses that the spacers are present when the rubbing occurs and thus that the rubbing occurs *after* the spacers are formed. All of the limitations of the claimed invention are thus disclosed.

Further, one having ordinary skill in the art would have been motivated to combine the references. The Supreme Court has held that “any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” *KSR*, 550 U.S. at 420. Both Sugata and Tsuboyama relate to LCD panel manufacturing and the formation of spacers. They share the common goal of providing spacing elements that do not disturb the orientation or alignment of liquid crystal molecules. Sugata col. 2 ll. 54–57 (stating that its object is “provid[ing] a liquid display panel in which alignment or orientation of liquid crystal molecules is not disturbed on an image display surface”); Tsuboyama col. 2 ll. 35–38 (stating that its invention provides a liquid crystal device “which is free of orientation or alignment defects over the whole area of the device despite spacers which are present” within the liquid crystal). The Commission thus

correctly determined that one having ordinary skill in the art would have had reason to combine the two references to arrive at the claimed invention.

We further agree with Intervenorors that the Commission did not impermissibly shift the burden of proof during its obviousness analysis. In *Cyclobenzaprine*, we reversed a district court’s determination of obviousness because it occurred before any analysis of secondary considerations. 676 F.3d at 1075 (finding that the “premature nature of the [district] court’s obviousness finding is apparent. . . . It was not until after the district court found the asserted claims obvious that it proceeded to analyze the objective considerations, or what it called the ‘secondary considerations’”). Additionally, we recognized that it is not error when panels use “prima facie” and “rebuttal” language yet determine obviousness only after considering all the evidence put forth by the parties. *Id.* at 1077 (“[E]ven panels that have used the ‘prima facie’ and ‘rebuttal’ language have generally made clear that a fact finder must consider *all* evidence of obviousness and nonobviousness before reaching a determination.”). Here, the Commission did just that. After evaluating Sugata, Tsuboyama, and the expert testimony, the Commission found that “respondents have shown a *prima facie* case of obviousness.” *Commission Opinion* at 62. The Commission then evaluated Thomson’s secondary considerations before finding the asserted claims of the ’063 patent to have been obvious. *Id.* at 63. The Commission thus did not engage in impermissible burden shifting and did not err in finding the ’063 patent’s asserted claims obvious. Because we find no error in the Commission’s obviousness determination, we hold that the Commission correctly concluded that claims 1–4, 8, 11, 12, 14, 17, and 18 of the ’063 patent were obvious over Sugata in view of Tsuboyama.

Thomson also argues that the Commission erred by finding that CMI’s LCD modules do not infringe the ’063

patent. Because we have found the asserted claims of the '063 patent obvious, we do not need to reach that issue.

B. '674 PATENT

Thomson argues that the Commission erred in finding that the Fujitsu reference alone anticipates or renders obvious, in combination with the knowledge of one skilled in the art, the asserted claims of the '674 patent. Thomson's only contention is that Fujitsu never expressly discloses a drain bus line and electrode wiring formed in the same layer as the source, drain, and opposing electrodes.

The Commission responds that substantial evidence supports the Commission's finding that Fujitsu discloses the asserted claim limitations. It argues that both the figures and text of Fujitsu clearly show that the drain bus line is formed on the same metal layer as the source and drain electrodes. According to the Commission, expert testimony at trial further showed that the cross-stitching on the figures indicated that those components were located on the same layer.

We agree with the Commission that substantial evidence supports the finding that Fujitsu discloses all of the asserted claim limitations. When discussing Fujitsu, the Commission found that the reference discloses the drain bus line in the same layer as the source and drain electrodes in both: (1) Fujitsu's Figure 1 along with accompanying expert testimony, *id.* at 82, and (2) Figure 3 accompanied by the supporting text, *id.* at 83. The Commission relied on the cross-sectional shading of Figure 1 and Intervenor's expert testimony to come to this conclusion. *Id.* at 82–83 (“Dr. Hatalis testified that when elements such as the drain bus lines and drain electrodes are disclosed as being connected to one another, the continuous and consistent shading between those elements in Figure 1 indicates to one of ordinary skill in the art that they are connected together in the same layer.”). The

Commission further found that Fujitsu's textual disclosure and Figure 3 describe the drain bus line and the drain electrode as being on the same metal layer. *Id.* at 85.

The Commission's finding is supported by substantial evidence, including the figures of Fujitsu, the disclosure of Fujitsu, and the expert testimony before the Commission. As the Commission correctly found, the consistent shading of the Fujitsu reference indicates that the drain bus line and electrode wiring are formed on the same layer as the source, drain, and opposing electrode. This finding is supported by the Intervenor's expert testimony. Substantial evidence thus supports the finding that Fujitsu discloses a drain bus line and electrode wiring formed on a single metal layer. Because substantial evidence supports that determination, and Thomson's only contention was that the claimed elements were not on the same metal layer, we therefore affirm the Commission's determination of anticipation and obviousness of claims 1, 7–9, 11, 13, 14, 16, 17, and 18 of the '674 patent.

CONCLUSION

We have considered Thomson's remaining arguments and conclude that they are without merit. Accordingly, the Commission's final determination is

AFFIRMED