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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FINISAR CORP.,
Petitioner,

v.

THOMAS SWAN & CO. LTD.,
Patent Owner.

Case IPR2014-00462
Patent 8,089,683 B2

Before SALLY C. MEDLEY, MICHELLE R. OSINSKI, and BARBARA A. PARVIS, *Administrative Patent Judges.*

PARVIS, *Administrative Patent Judge*.

DECISION
Institution of *Inter Partes* Review
37 C.F.R. § 42.108

I. INTRODUCTION

Finisar Corp. ("Petitioner") filed a corrected Petition (Paper 5, "Pet.") requesting an *inter partes* review of claims 18 and 19 of U.S. Patent No. 8,089,683 B2 (Ex. 1001, "the '683 patent"). Thomas Swan & Co. Ltd. ("Patent Owner") filed a Preliminary Response (Paper 8, "Prelim. Resp."). We have jurisdiction under 35 U.S.C. § 314, which provides that an *inter partes* review may not be instituted "unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314(a).

Upon consideration of the Petition and Preliminary Response, we determine that Petitioner has established a reasonable likelihood that it would prevail in showing the unpatentability of claims 18 and 19 of the '683 patent. Accordingly, pursuant to 35 U.S.C. § 314, we institute an *inter partes* review as to claims 18 and 19 of the '683 patent.

A. Related Matters

The parties represent that the '683 patent is the subject of district court proceeding in *Thomas Swan & Co. v. Finisar Corp.*, No. 2:13-cv-178 (E.D. Tex.). Pet. 5; Patent Owner's Mandatory Notices under 37 C.F.R. § 42.8, Paper 7, 2.

Petitioner filed additional Petitions for *inter partes* review of three other patents related to the '683 patent, namely, U.S. Patent Nos. 7,145,710; 7,664,395; and 8,335,033. Prelim. Resp. 3; *See* IPR2014-00460 (Paper 2, Paper 5); IPR2014-00461 (Paper 1, Paper 5); IPR2014-00465 (Paper 1, Paper 5), respectively.

B. The '683 Patent

The '683 patent is directed to a method of operating an optical device comprising a spatial light modulator (SLM). Ex. 1001, 2:49–51. Figure 28 of the '683 patent is reproduced below.

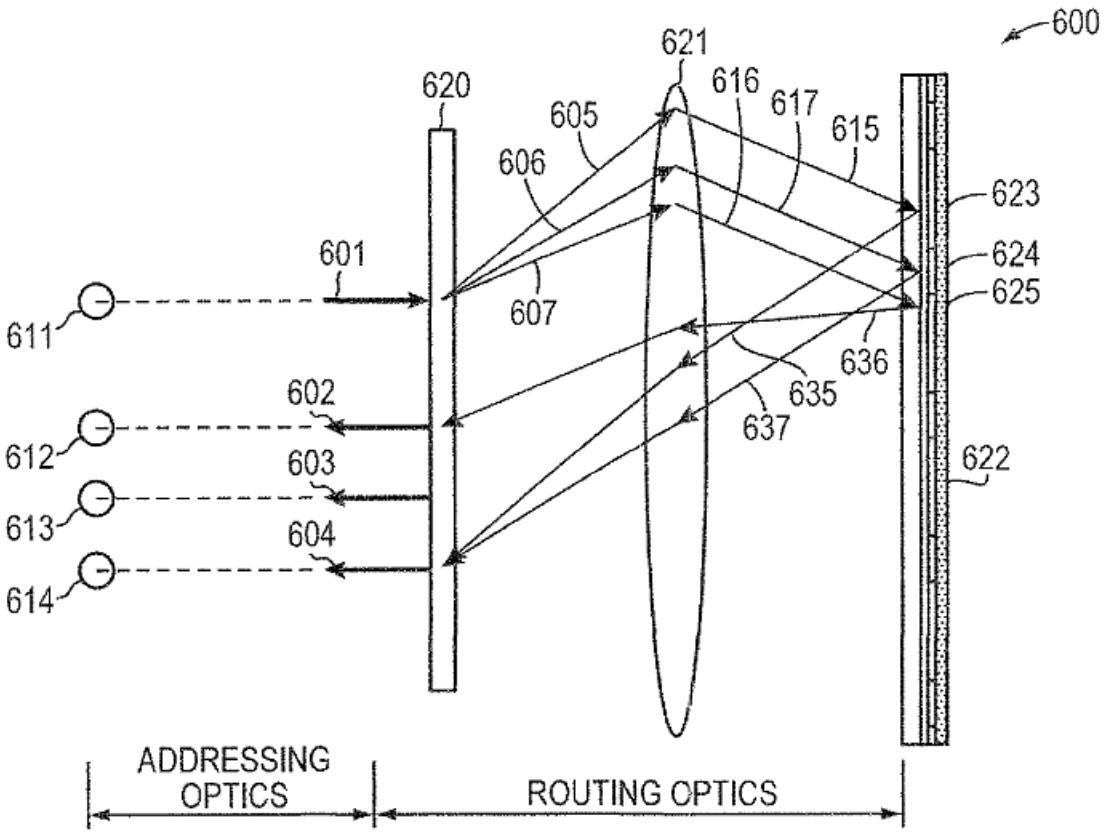

FIG. 28

Figure 28 of the '683 patent illustrates wavelength routing and selection device 600.

As shown in Figure 28, wavelength routing and selection device 600 receives input beam 601 through input port 611. Ex. 1001, 42:10–12. Grating 620 separates input beam 601 into single wavelength emergent beams 605, 606, and 607 each angularly offset by a different amount, and incident on lens 621. *Id*. at 42:22–25. Lens 621 refracts single wavelength

emergent beams 605, 606, and 607 so that they emerge as mutually parallel beams 615, 616, and 617. *Id*. at 42:25–26. Each of beams 615, 616, and 617 is incident upon respective group 623, 624, and 625 of pixels on SLM 622. *Id*. at 42:26–28.

Each of respective group 623, 624, and 625 of pixels on SLM 622 displays a respective hologram, which provides a different deviation from the specular direction, resulting in reflected beams 635, 636, and 637. *Id*. at 42:28–31. Reflected beams 635, 636, and 637 are incident upon lens 621 and routed back to grating 620. *Id*. at 42:31–32.

C. Illustrative Claim

Claim 18 is the independent claim challenged by Petitioner. Claim 19 depends directly from claim 18. Claim 18 is reproduced below:

> 1. An optical device with an array of phase-modulating elements, the device having an input arranged to receive a multiplex of optical signals at different wavelengths in a common beam, the array of phase modulating elements being arranged to receive the optical signals of the multiplex from the device input, *to separate the optical signals into at least two groups, and to process at least one of the groups of optical signals*, wherein the array of phase-modulating elements is provided by a reflective LCOS SLM.

Ex. 1001, 61:61–62:2 (emphasis added).

D. Prior Art Relied Upon

Michael C. Parker, Dynamic Holograms for Wavelength Division Multiplexing (Nov. 1996) (Ph.D. dissertation, University of Cambridge) (on file with Cambridge University Library) ("Parker Thesis," Ex. 1006).

Stephen T. Warr, Free-Space Switching for Optical Fibre Networks (July 1996) (Ph.D. dissertation, University of Cambridge) (on file with Cambridge University Library) ("Warr Thesis," Ex. 1005).

E. Alleged Grounds of Unpatentability

The information presented in the Petition sets forth Petitioner's contentions of unpatentability of claims 18 and 19 of the '683 patent based on the following specific ground.

Claims Challenged	Basis	References
18 and 19	§ 103	Parker Thesis and Warr Thesis

II. ANALYSIS

A. Claim Construction

We determine the meaning of certain claim terms for purposes of this Decision. In an *inter partes* review, claim terms in an unexpired patent are given their broadest reasonable construction in light of the patent specification. 37 C.F.R. § 42.100(b); Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,766 (Aug. 14, 2012). Under the broadest reasonable construction standard, claim terms are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). Any special definition for a claim term must be set forth in the specification with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994). In determining the proper construction of a claim term, we must be careful not to read a particular embodiment appearing in the written description into the

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