

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

K.J. PRETECH CO., LTD.,
Petitioner,

v.

INNOVATIVE DISPLAY TECHNOLOGIES LLC,
Patent Owner.

Case IPR2015-01867¹
Patent 7,537,370

Before THOMAS L. GIANNETTI, MIRIAM L. QUINN, and
BEVERLY M. BUNTING, *Administrative Patent Judges*.

GIANNETTI, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

¹ This proceeding is joined with IPR2016-00914.

K.J. Pretech Co., Ltd. (“Petitioner”) filed a Petition pursuant to 35 U.S.C. §§ 311–319 to institute an *inter partes* review of claims 1, 4, 5, 9, 13, 29, and 47 of U.S. Patent No. 7,537,370 (“the ’370 patent”). Paper 2 (“Pet.”). Innovative Display Technologies LLC (“Patent Owner”) filed a Preliminary Response. Paper 11 (“Prelim. Resp.”). The Board instituted *inter partes* review of claims 29 and 47, and denied the Petition as to the remaining challenged claims. Paper 15 (“Institution Decision”)

Subsequent to institution, Patent Owner filed a Patent Owner Response. Paper 20 (“PO Resp.”). Petitioner filed a Reply. Paper 23 (“Pet. Reply”).

An oral hearing concerning this case was held on January 10, 2017.² The record contains a transcript of the hearing. Paper 39 (“Tr.”).

This proceeding has been joined with IPR2016-00194. Paper 24. This Final Written Decision applies to both proceedings.

The Board has jurisdiction under 35 U.S.C. § 6(b). This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons that follow, we determine that Petitioner has not shown, by a preponderance of the evidence, that claims 29 and 47 of the ’370 patent are unpatentable.

I. BACKGROUND

A. *The ’370 patent (Ex. 1001)*

The ’370 patent is titled “Light Emitting Panel Assemblies.” The Abstract describes the subject matter as follows:

² The hearing also included cases IPR2015-01866 and IPR2015-01688, involving the same parties.

Light emitting panel assemblies include an optical panel member having a pattern of light extracting deformities on or in one or both sides to cause light to be emitted in a predetermined output distribution. The pattern of light extracting deformities on or in one side may have two or more different types or shapes of deformities and at least one of the types or shapes may vary along the length or width of the panel member. Where the light extracting deformities are on or in both sides, at least some of the deformities on or in one side may be of a different type or shape or vary in a different way or manner than the deformities on or in the other side.

Ex. 1001, Abstract.

The patent describes varying the light extracting deformities to control the light:

By varying the density, opaqueness or translucence, shape, depth, color, area, index of refraction, or type of deformities 21 on an area or areas of the panels, the light output of the panels can be controlled. The deformities or disruptions may be used to control the percent of light emitted from any area of the panels. For example, less and/or smaller size deformities 21 may be placed on panel areas where less light output is wanted. Conversely, a greater percentage of and/or larger deformities may be placed on areas of the panels where greater light output is desired.

Id. at col. 4, ll. 62–col. 5, l. 4. The patent also describes “[v]arying the percentages and/or size of deformities in different areas of the panel . . . in order to provide a uniform light output distribution.” *Id.* col 5, ll. 5–7.

Figure 4a of the patent follows:

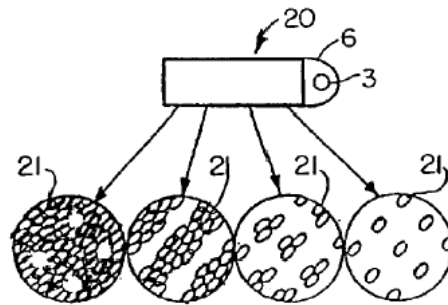


FIG. 4a

Figure 4a shows a portion of a light emitting panel assembly 20 having one form of pattern of light extracting deformities 21 on one side of the panel. *Id.* col. 2, ll. 18–20. The pattern of light extracting deformities in Figure 4a includes a variable pattern. *Id.* col. 4, ll. 40–42. The '370 patent also discloses that a pattern of light extracting deformities or disruptions may be provided on one or both sides of the panel members or on one or more selected areas on one or both sides of the panel members, as desired. *Id.* col. 4, ll. 31–34.

B. Challenged Claims

Claims 29 and 47 follow:

29. A light emitting panel assembly comprising
at least one light source,

an optical panel member having at least one input edge for receiving light from the at least one light source, the panel member having front and back sides and a greater cross sectional width than thickness, both the front and back sides having a pattern of light extracting deformities that are projections or depressions on or in the sides to cause light to be emitted from the panel member in a predetermined output distribution,

where the pattern of light extracting deformities on or in at least one of the sides varies along at least one of the length

and width of the panel member and at least some of the light extracting deformities on or in one of the sides vary in a different way or manner than the light extracting deformities on or in the other side of the panel member, and at least one film, sheet or substrate overlying at least a portion of one of the sides of the panel member to change the output distribution of the emitted light such that the light will pass through a liquid crystal display with low loss.

47. A light emitting panel assembly comprising
at least one light source,

an optical panel member having at least one input edge for receiving light from the at least one light source, the panel member having front and back sides and a greater cross sectional width than thickness, both the front and back sides having a pattern of light extracting deformities that are projections or depressions on or in the sides to cause light to be emitted from the panel member in a predetermined output distribution,

where the pattern of light extracting deformities on or in at least one of the sides varies along at least one of the length and width of the panel member and at least some of the light extracting deformities on or in one of the sides vary in a different way or manner than the light extracting deformities on or in the other side of the panel member,

wherein the panel member has a transition region between the at least one input edge and the patterns of light extracting deformities to allow the light from the at least one light source to mix and spread, and at least one side of the transition region contains optical elements for reflecting or refracting light from the at least one light source.

C. Related Proceedings

Patent Owner identifies numerous proceedings in which it has alleged infringement of the '370 patent. *See* Paper 5 for a listing. In addition, Patent Owner identifies several other petitions requesting *inter partes* review

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