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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte TOMOHIKO TANAKA, MICHIAKI FUJI, NAO MURAKAMI, and TAKASHI SHIMIZU

Appeal 2015-000329[1]
Application 13/475,435
Technology Center 1700

Before ROMULO H. DELMENDO, JEFFREY W. ABRAHAM, and JENNIFER R. GUPTA, *Administrative Patent Judges*.

DELMENDO, *Administrative Patent Judge*.

DECISION ON APPEAL

The Applicants (hereinafter the "Appellants")[2] appeal under 35 U.S.C. § 134(a) from a final decision of the Primary Examiner to reject claims 1–6 and 8–17.[3] We have jurisdiction under 35 U.S.C. § 6(b).

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[1] We heard oral arguments from the Appellants' representative on November 10, 2016. A written transcript will be entered into the record when it is made available.

[2] The Appellants state that the real parties in interest are "Mitsubishi Chemical Corporation and Nitto Denko Corporation" (Appeal Brief filed May 30, 2014, hereinafter "Appeal Br.," 1).

[3] Appeal Br. 1, 3; Final Office Action delivered electronically on November 6, 2013, hereinafter "Final Act.," 3–6; Examiner's Answer delivered electronically on July 30, 2014, hereinafter "Ans.," 2–6.

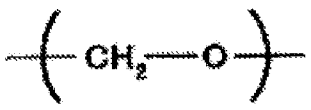
We reverse.

BACKGROUND

The subject matter on appeal relates to a polycarbonate resin film, which may be stretched to form a transparent film suitable as an optical compensation film for liquid-crystal displays (Specification, hereinafter "Spec.," ¶¶ 1–2). According to the Appellants, the film has excellent mechanical strength and heat resistance and provides a stretched film that has reduced thickness unevenness (*id.* ¶ 6).

Claim 1, the sole independent claim on appeal, is reproduced from page 10 of the Appeal Brief (Claims Appendix), with key limitations highlighted in italicized text, as follows:

> 1. A polycarbonate resin film for film stretching, comprising:
>
> a polycarbonate resin which comprises at least a constitutional unit derived from a dihydroxy compound (A) that has a bonded structure represented by the structural formula (1) and a constitutional unit derived from at least one dihydroxy compound (B) selected from the group consisting of cyclohexanedimethanol, diethylene glycol and polyethylene glycol,
>
> wherein said dihydroxyl compound (A) is a compound which has an aromatic group as a side chain and has, in a main chain, ether groups each bonded to an aromatic group,
>
> said polycarbonate resin having a photoelastic coefficient of 30×10^{-12} Pa^{-1} or lower, and
>
> the polycarbonate resin film satisfies the expression (2) when subjected to a tensile test at a standard stretching temperature for the polycarbonate resin and at a pulling speed (strain rate) of 1,000 %/min:



(1)

wherein no hydrogen atom is bonded to the oxygen atom contained in the structural formula (1); and

0.9 ≤ [(lower yield stress in tension)/(upper yield stress in tension)] ≤ 1 (2).

REJECTIONS ON APPEAL

Claims 1–6 and 8–17 stand rejected as follows:

I. Claims 1–5 under 35 U.S.C. § 102(b) as anticipated by Fujimori et al. (hereinafter "Fujimori");[4] and

II. Claims 6 and 8–17 under 35 U.S.C. § 103(a) as unpatentable over Fujimori in view of Yoshimi et al. (hereinafter "Yoshimi")[5] and Fuji et al. (hereinafter "Fuji").[6]

(Ans. 2–4; Final Act. 3–6.)[7]

DISCUSSION

The Examiner found that Fujimori describes a polycarbonate resin optical film that may include units derived from 9,9-bis[4-(2-hydroxyethoxy)phenyl)fluorine, which is listed in the current Specification (¶ 52) as a suitable dihydroxy compound (A), and 1,4-cyclohexanedimethanol (Ans. 2). The Examiner further found that the resulting polycarbonate is disclosed as having a photoelastic coefficient of less than 27 x 10^{-12} Pa^{-1} (*id.*). According to the Examiner (*id.*), Fujimori's film would inherently possess the characteristic (i.e., lower yield stress in

[4] JP 2004-067990 A, published March 4, 2004 (computer translation of record).
[5] US 5,245,456, issued September 14, 1993.
[6] WO 2007/148604 A1, published December 27, 2007.
[7] The Examiner withdrew a rejection of claim 12 under 35 U.S.C. § 112, ¶ 4 (Ans. 4).

tension/upper yield stress in tension or tensile test ratio) specified in claim 1 as expression (2) "[g]iven that the composition is the same as that claimed" (*id.*).

The Appellants contend, *inter alia*, that the Examiner "committed reversible error by concluding the claimed tensile test ratio to be met based on the constituent monomers alone" (Appeal Br. 6). Specifically, the Appellants argue that the current Specification identifies other factors such as molecular weight, proportion of monomers, and the presence or absence of plasticizers as affecting the tensile test ratio (*id.*).

We agree with the Appellants. It is well-settled that inherency may not be established by mere probabilities or possibilities. *See, e.g., In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999).

Here, as pointed out by the Appellants, the current Specification makes clear that the relationship between the upper yield stress in tension and the lower yield stress in tension depends not only on the monomeric constituents but also on other factors such as molecular weight, proportions of monomeric units, or plasticizer (Spec. ¶¶ 21–22). Thus, although the Examiner correctly found that Fujimori discloses a polycarbonate film that may include the same monomeric units specified as dihydroxy compounds (A) and (B) in claim 1 (Fujimori ¶¶ 8–11), that finding is insufficient to support the additional finding that Fujimori's film would inherently or necessarily possess the specified lower yield stress in tension/upper yield stress in tension ratio.

Because both rejections on appeal are based on this prejudicial error, we cannot uphold them.

SUMMARY

Rejections I and II are reversed. Therefore, the Examiner's final decision to reject claims 1–6 and 8–17 is reversed.

REVERSED