

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CHRISTOPH MENGEL, DIETMAR DUDEK,
MARK A. HACKLER, and
ANANDKUMAR RAMAKRISHNAN KANNURPATTI

Appeal No. 2006-0511
Application No. 10/258,312

ON BRIEF

Before PAK, OWENS, and WALTZ, **Administrative Patent Judges**.
WALTZ, **Administrative Patent Judge**.

DECISION ON APPEAL

This is a decision on an appeal from the primary examiner's refusal to allow claims 1 through 32, 34, 36 through 38 and 40 as amended subsequent to the final rejection (see the amendment dated Dec. 1, 2004, entered as per the Advisory Action dated Dec. 21, 2004). Claims 33, 35 and 39 are the only other claims pending in this application and are indicated as allowable (*id.*; see also the Brief, page 2). We have jurisdiction pursuant to 35 U.S.C. § 134.

According to appellants, the invention is directed to a process for producing a flexographic printing plate comprising providing a photosensitive element including at least one photopolymerizable elastomeric layer that comprises at least one thermoplastic binder, at least one compound capable of addition polymerization, and a photoinitiator, where the photopolymerizable layer has specified properties (Brief, page 2). Representative independent claim 1 is reproduced below:

1. A process for producing a flexographic printing plate comprising:

i) providing a photosensitive element comprising

a) a support;

b) at least one photopolymerizable elastomeric layer on the support having a composition comprising at least one thermoplastic binder; at least one compound capable of addition polymerization; and a photoinitiator; wherein the layer has a melt flow index of at least 4 grams/10 min under a 2.16 kilogram weight at 140°C, and wherein the layer when exposed to actinic radiation to determine a log-log plot of the dynamic storage modulus (G') versus frequency (f), exhibits a slope of less than 0.18;

ii) imagewise exposing the element to actinic radiation to polymerize areas exposed to radiation; and

iii) thermally treating the element of ii) to remove unpolymerized material from the element and form a relief surface.

The examiner has relied on the following references as evidence of unpatentability:

Peterson et al. (Peterson) 0 469 735 B1 Feb. 05, 1992
(published European Patent Application)

Wang et al. (Wang) 0 665 469 A2 Aug. 02, 1995
(published European Patent Application)

Claims 1-4, 6-28, 31-32, 34, 36-38 and 40 stand rejected under 35 U.S.C. § 102(b) as anticipated by Wang (Answer, page 3). Claims 5, 29 and 30 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Wang in view of Peterson (Answer, page 5). Based on the totality of the record, we *affirm* both rejections on appeal essentially for the reasons stated in the Answer, as well as those reasons set forth below.

OPINION

A. The Rejection over Wang

The examiner finds that Wang discloses a process for producing a flexographic printing plate by providing a photosensitive element, imagewise exposing the element to actinic radiation to polymerize areas exposed to the radiation, and thermally treating the exposed element to remove unpolymerized material from the element to yield a relief surface (Answer, page 4). The examiner also finds that the photosensitive element includes at least one photosensitive elastomeric composition comprising a thermoplastic

elastomeric block copolymer, a cross-linking agent, and a photoinitiator (*id.*). The examiner recognizes that Wang fails to disclose the melt flow index of the photosensitive elastomeric layer and the log-log plot of the exposed layer having a specific slope, as required by claim 1 on appeal (*id.*). However, it is the examiner's "position" that there is a reasonable belief that the claimed properties would have been inherent in the photosensitive elastomeric layer of Wang since the components of this layer in Wang are the same as those disclosed by appellants (Answer, pages 4-5 and 6-7). We agree.

As correctly argued by appellants, Wang does not disclose or suggest a melt flow index and slope of G' for the photopolymerizable elastomeric layer as required in the claims on appeal (Brief, page 3; see the Answer, page 4). Appellants further argue that even though the photopolymerizable elastomeric layers of Wang include at least one thermoplastic binder, at least one compound capable of addition polymerization, and a photoinitiator, not all photopolymerizable elastomeric layers exhibit a melt flow index and slope of G' within the claimed values (Brief, page 3). Appellants argue that the Examples in their specification establish that not all photopolymerizable elastomeric layers exhibit melt

flow indices or a slope of G' within the claimed ranges (Brief, pages 3-7).

Appellants' arguments are not persuasive. Wang is directed to the same problems facing appellants, namely the problems associated with solvent and aqueous wash developing systems for producing flexographic printing plates (col. 1, ll. 40-48; see appellants' specification, page 1, ll. 23-27). Wang solves these problems by the same method as appellants, namely use of a thermal development process (col. 1, ll. 49-56; specification, page 1, l. 28-page 2, l. 5). As correctly found by the examiner (Answer, page 4), Wang discloses each and every step of the claimed process, i.e., providing a photosensitive element comprising a support and at least one photopolymerizable elastomeric layer, imagewise exposing the element to actinic radiation to polymerize areas exposed to the radiation, and thermally treating the exposed element to remove unpolymerized material and form a relief surface (Wang, col. 2, l. 50-col. 3, l. 43). As also correctly found by the examiner (Answer, pages 4 and 7), Wang discloses a photosensitive elastomeric layer which preferably comprises 75-85 parts-by-weight (pbw) of a styrene-isoprene-styrene block copolymer with a non-elastomer to elastomer ratio of 10:90 to 35:65, 5 to 15 pbw of a crosslinker such as multi-functional acrylates or a polyacryloyl

oligomer, and 1 to 2.5 pbw of known classes of photoinitiators such as quinones, benzophenones, and peroxides (Wang, col. 4, l. 56-col. 6, l. 1). Appellants disclose photosensitive elastomeric layers which preferably comprise at least 60 weight % of a poly(styrene/isoprene/styrene) block copolymer with a non-elastomer to elastomer ratio of 10:90 to 35:65, 10 to 20 weight % of at least one compound capable of addition polymerization such as multi-functional acrylates or a polyacryloyl oligomer, and a known class of photoinitiator such as quinones, benzophenones, and peroxides (specification, page 4, l. 12-page 5, l. 32). Since the examiner has found that Wang discloses the same materials as appellants to form the at least one photopolymerizable elastomeric layer, and these materials function in the same way in the same process as appellants' materials function in their process, we determine that the examiner has established a reasonable belief that the elastomeric layer of Wang would have properties within the scope of the ranges of properties recited in the claims on appeal. *See In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977); *In re Spada*, 911 F.2d 705, 708, 15 USPQ2d 1655, 1657 (Fed. Cir. 1990).

As held by one predecessor of our reviewing court:

...[W]here the Patent Office has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an inherent characteristic of the prior art,

it possesses the authority to require the applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on. [Citation omitted]. This burden ... is applicable to product and process claims reasonably considered as possessing the allegedly inherent characteristics.

...

Whether the rejection is based on "inherency" under 35 USC 102, on "prima facie obviousness" under 35 USC 103, jointly or alternatively, the burden of proof is the same, and its fairness is evidenced by the PTO's inability to manufacture products or to obtain and compare prior art products. [Citation and footnote omitted]. *In re Best*, 911 F.2d at 708-09, 195 USPQ at 433-34.

Accordingly, in view of the discussion above, the burden of proof has shifted to appellants to prove that the "subject matter shown to be in the prior art does not possess the characteristic relied on." *In re Best, supra*. However, we determine that appellants' reliance on the Examples in their specification (Brief, pages 3-7) does not meet this burden of proof. The only Examples that compare materials similar to those of Wang are Comparative Examples 1C, 2C and 3C (e.g., see page 20 of the specification). However, the comparison of the Comparative Examples with the Examples of appellants' invention is not convincing for several reasons. First, Example 1 (specification, page 18) does not disclose the molecular weight of either poly(styrene/isoprene/styrene) block copolymer used, but Comparative Example 1C (specification, page 20)

is limited to specific molecular weights for each block copolymer, while neither the claims on appeal nor Wang are so limited. Second, the elastomeric binders in the Example and Comparative Example differ markedly in diblock content, which content is not recited in the claimed subject matter nor in Wang. Third, as correctly noted by the examiner (Answer, page 7), the numerous additives used in the Examples are not recited or required by the claims on appeal. As admitted by appellants, these additives may have no, some or a major influence on the resulting rheological properties of the elastomeric layer (Brief, page 7). Therefore appellants have not established that the properties of the claimed subject matter differ from the properties of the elastomeric layer disclosed by Wang (e.g., see Example 1 of Wang).

For the foregoing reasons and those stated in the Answer, we determine that the examiner has established a prima facie case of anticipation in view of the reference evidence, which case has not been overcome by appellants' arguments or evidence. Therefore, we affirm the rejection of claims 1-4, 6-28, 31-32, 34, 36-38 and 40 under section 102(b) over Wang.

B. The Rejection over Wang in view of Peterson

The examiner adopts the findings from Wang as discussed above (Answer, page 5). The examiner applies Peterson to show that the

limitations of claims 5, 29 and 30, directed to repeated contacting (claim 5) and backflash (claims 29 and 30), were well known in this art (Answer, page 6).¹ Appellants merely argue that "Peterson et al. does not cure the deficiencies of Wang" (Brief, page 8). Accordingly, we adopt our remarks about Wang from above. We also adopt the examiner's findings of fact and conclusion of law regarding the combination of Wang and Peterson (Answer, pages 5-6), and affirm the rejection of claims 5, 29 and 30 under section 103(a) over Wang in view of Peterson.

C. Summary

The rejection of claims 1-4, 6-28, 31-32, 34, 36-38 and 40 under 35 U.S.C. § 102(b) over Wang is affirmed. The rejection of claims 5, 29 and 30 under 35 U.S.C. § 103(a) over Wang in view of Peterson is also affirmed.

The decision of the examiner is affirmed.

¹We note that these limitations have also been disclosed by Wang (col. 2, ll. 3-11, regarding forming a "floor"; col. 8, ll. 3-8, regarding the "traditional backflashing" method; and col. 9, ll. 39-45, regarding the use of numerous "contacts" or passes to remove all of the uncured material).

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv)(2004).

AFFIRMED

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| CHUNG K. PAK |) | |
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| |) | BOARD OF PATENT |
| TERRY J. OWENS |) | APPEALS |
| Administrative Patent Judge |) | AND |
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