

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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 TSI-ZONG TZOU and JOAN V. BRENNAN

Appeal No. 2007-1111
Application No. 10/126,804

ON BRIEF

Before ADAMS, GREEN and LINCK, Administrative Patent Judges.

ADAMS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1-9, 13-17, 19-23 and 27-30, which are all the claims pending in the application.

Claims 1 and 13 are illustrative of the subject matter on appeal and are reproduced below:

1. A packaged article comprising:
a quantity of photocurable material; and
a container at least partially surrounding the photocurable material,
the container including a body that is shaped by a molding or
thermoforming operation to present a chamber, the body comprising a
polymer and metallic particles, wherein the particles are metal flakes
and sufficiently dispersed in the polymer to form a container that is
substantially opaque to the transmission of light in the range of about
400 nanometers to about 600 nanometers.

13. The packaged article of claim 1 wherein the photocurable material includes a dye that changes color as the material cures.

The references relied upon by the examiner are:

Wilcox et al. (Wilcox)	5,624,260	Apr. 29, 1997
Akao et al. (Akao)	5,637,364	Jun. 10, 1997
Keller et al. (Keller) (‘653)	EP 0 388 086 EP 0 609 653	Sep. 19, 1990 Aug. 10, 1994

GROUNDS OF REJECTION

Claims 1-9, 15-17, 19-23, 29 and 30 stand rejected under 35 U.S.C. § 103 as being unpatentable over the combination of ‘653, Wilcox, Akao and Keller.

Claims 13, 14, 27 and 28 stand rejected under 35 U.S.C. § 103 as being unpatentable over the combination of ‘653, Wilcox, Akao, Keller and appellants’ admitted prior art.

We affirm.

CLAIM GROUPING

Appellants do not separately argue or group the claims. Accordingly, for each ground of rejection, the claims will stand or fall together. Therefore we limit our discussion to representative claims 1 and 13. Claims 2-9, 15-17, 19-23, 29 and 30 will stand or fall together with claim 1; and claims 14, 27 and 28 will stand or fall together with claim 13. 37 CFR § 41.37(c)(1)(vii) (July 2005).

DISCUSSION

The combination of '653, Wilcox, Akao and Keller:

Claim 1-9, 15-17, 19-23, 29 and 30 stand rejected under 35 U.S.C. § 103 as being unpatentable over the combination of '653, Wilcox, Akao and Keller. As set forth above, we limit our discussion to claim 1. The examiner finds that '653 discloses a container for storing an orthodontic/dental bracket including a photocurable adhesive. In this regard, the examiner finds '653 discloses a container comprising a sidewall, bottom and flange that are integrally formed from a sheet of flexible material. Answer, page 4, and '653, column 4, lines 37-40. From this the examiner reasons that '653 meets the requirement of appellants' claimed invention that the container be molded.¹ Id. In addition, '653 discloses that the material used to form the container "provides a substantial barrier to the transmission of light . . ." '653, column 4, lines 37-40.

The examiner finds that Wilcox teaches "that a container of an adhesive material which one does not wish to be exposed to light may be made by injection molding to form the container into a shape for receiving the adhesive." Answer, page 4. In this regard, the examiner finds that Wilcox teaches "that the container may be made with pigments [(such as carbon black)] incorporated/dispersed into the injection moldable material to prevent actinic light (i.e. all active light) from reaching the adhesive. . . ." Answer, page 5; and Wilcox, column 5, lines 24-29.

¹ According to the examiner (Answer, page 4), to the extent that "formed" means 'molded', [a]ppellant's [sic] claim language with respect to molding is met by this. Moreover, it is apparent and therefore obvious that the container of document EPO 653 is molded in some manner, although the document does not particularly disclose molding the container." We agree.

The examiner also finds that Wilcox teaches that metal flakes “may be provided in the injection moldable material for the purpose of acting as a reinforcing filler to the plastic.” Answer, page 5. In this regard, the examiner finds that Akao teaches “that metal flake filler is almost as preferable as carbon black in providing light shielding to a container.” Id.

Based on this evidence, the examiner finds (Answer, page 5), it would have been *prima facie* obvious to a person of ordinary skill in the art at the time the invention was made to make the ‘653 container by injection molding as taught by Wilcox. As Wilcox teaches that aluminum flake provides a reinforcing property to the plastic, the examiner finds that it would have been *prima facie* obvious at the time of appellants’ claimed invention to include “aluminum flake in the injection molded material to provide a reinforced property to the plastic. . . .” Id. In addition, the examiner finds (id.) that Wilcox teaches the use of a “material with a light shield to prevent any light (i.e. in any wavelength) from getting to the adhesive.” As Akao teaches that the aluminum flake suggested by Wilcox has the additional property of shielding light transmission, a person of ordinary skill in the art would have been further motivated to include aluminum flake in the plastic to contribute to the light shielding properties of the plastic. Id.

We find no error in the examiner’s *prima facie* case of obviousness.²

For their part, appellants assert that “653 does not teach that there is a problem with light transmission or the rigidity of the containers. As a result, there is no reason to substitute the optional reinforcing metal flakes of Wilcox et al. for

² We recognize the examiner’s reliance on Keller (Answer, page 5-6), to teach the inclusion of aluminum particulates to prepare packaging film with high opacity. In our opinion, Keller is cumulative to the teachings of Akao and Wilcox.

the black PETG of EPO 653." Brief, page 8. We disagree. In our opinion, a person of ordinary skill in the art would have appreciated that metal flakes would not only enhance the rigidity of the container but also the container's opacity.

Accordingly, as discussed above, we agree with the examiner's reasoning that a person of ordinary skill in the art would have found it *prima facie* obvious to add metal flakes to the container of '653. In addition, we are not persuaded by appellants' focus on "black PETG" which is simply a preferred embodiment of '653. See '653, column 4, lines 37-46, emphasis added,

[t]he sidewall 36, bottom 38 and top flange 44 are integrally formed from a sheet of flexible material that provides a substantial barrier to the transmission of light, oxygen and water vapor. Preferably, the sheet of flexible material forming the, sidewall 36, bottom 38 and top flange 44 is black 0.33 mm thick polyethylene terephthalate glycol ("ODAR" brand PETG no. 6763, Kodak Chemical Company) that is treated with a silicone release agent (no. 24, Dow Chemical).

In our opinion, a person of ordinary skill in the art would have recognized that the container material could have been prepared with carbon black "to prevent actinic light from reaching the dental composition contained therein." Wilcox, column 3, lines 26-28.

According to appellants (Brief, bridging paragraph, pages 5-6), Wilcox does not appreciate that aluminum flake can be used to make a container opaque to transmission of light in the range set forth in claim 1. We are not persuaded by appellants' assertion. As discussed above, Wilcox recognized that aluminum flake can be used to enhance the rigidity of the container. This alone is sufficient motivation to incorporate aluminum flake into the '653 container. There is no evidence on this record to demonstrate that the incorporation of

aluminum flake into a container to enhance its rigidity would not also provide the container with the property of being “substantially opaque to the transmission of light in the range of about 400 nanometer to about 600 nanometers.”³ As discussed above, the examiner finds (Answer, page 5) that “metal flake filler is almost as preferable as carbon black in providing light shielding to a container.” In our opinion, the incorporation of aluminum flake into a container to enhance its rigidity would provide the container with the property of being “substantially opaque to the transmission of light in the range of about 400 nanometer to about 600 nanometers.” Accordingly, we are not persuaded by appellants’ assertion to the contrary.

Appellants also assert that their claimed invention provides unexpected advantages not recognized in the prior art. Brief, pages 9-10. According to appellants “containers that comprise a polymer and metallic particles dispersed therein provide an unexpected advantage when used with certain photocurable materials such as dental materials containing camphorquinone (‘CPQ’).” Brief, page 9. As claim 1 is not limited to a container containing CPQ we find that appellants’ assertion is not commensurate in scope with the claimed invention.⁴ In addition, appellants assert that their specification demonstrates that of the three containers described therein only two “exhibited excellent color

³ We note that appellants’ specification fails to disclose what is intended by the term “substantially opaque.”

⁴ In order to establish unexpected results for a claimed invention, objective evidence of non-obviousness must be commensurate in scope with the claims which the evidence is offered to support. *In re Greenfield*, 571 F.2d 1185, 1189, 197 USPQ 227, 230 (CCPA 1978); *In re Lindner*, 59 CCPA 920, 923, 457 F.2d 506, 508, 173 USPQ 356, 358 (1972); *In re Tiffin*, 58 CCPA 1420, 1421, 448 F.2d 791, 792, 171 USPQ 294 (1971).

protection" Id. We note, however, that claim 1 does not require the container to exhibit any particular amount of color protection. To the contrary, claim 1 simply requires that the container be substantially opaque. In our opinion, the combination of references relied upon by the examiner teaches a container within the scope of appellants' claimed invention. Accordingly we are not persuaded by appellants' assertion and evidence which is not commensurate in scope with claim 1.

On reflection we find no error in the examiner's prima facie case of obviousness. Accordingly, the burden of coming forward with evidence or argument was properly shifted to appellant. In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). For the reasons set forth above, appellants failed to carry their burden. Therefore, we affirm the rejection of claim 1 under 35 U.S.C. § 103 as being unpatentable over the combination of '653, Wilcox, Akao and Keller. Claims 2-9, 15-17, 19-23, 29 and 30 fall together with claim 1.

The combination of '653, Wilcox, Akao, Keller and appellants' admitted prior art:

Claims 13, 14, 27 and 28 stand rejected under 35 U.S.C. § 103 as being unpatentable over the combination of '653, Wilcox, Akao, Keller and appellants' admitted prior art. As set forth above, we limit our discussion to claim 13. The examiner relies on the combination of '653, Wilcox, Akao, and Keller as set forth above. Answer, page 7. The examiner relies on appellants' admitted prior art to teach "that it was known to make dental adhesives with a color changeable dye for changing from a distinctive color upon curing to one essentially 'colorless' for

allowing cleanup of the adhesive before hardening, yet not being distinctive after hardening.” Answer, page 8. Based on this evidence the examiner finds “it would have been obvious in view of this admission, to make the adhesive of the dental appliance of . . .[‘653] with such a color-changeable dye.” Id.

For their part appellants do not dispute that adhesives with color changeable dye were known in the art prior to the date of their invention. See e.g., Answer, page 11. Instead, appellants assert that the admission in their specification fails to make up for the deficiencies in the combination of ‘653, Wilcox, Akao, and Keller as discussed above. Brief, page 12. Having found no deficiency in the combination of ‘653, Wilcox, Akao, and Keller we are not persuaded by appellants’ assertion to the contrary. Accordingly, we affirm the rejection of claim 13 under 35 U.S.C. § 103 as being unpatentable over the combination of ‘653, Wilcox, Akao, Keller and appellants’ admitted prior art.

Claims 14, 27 and 28 fall together with claim 13.

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

AFFIRMED

Donald E. Adams Administrative Patent Judge)))	BOARD OF PATENT
Lora M. Green Administrative Patent Judge))	APPEALS AND INTERFERENCES
Nancy J. Linck Administrative Patent Judge))	

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