

The opinion in support of the decision being entered today is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* MATTHEW LIPSON

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Appeal 2007-2680  
Application 10/756,352  
Technology Center 1700

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Decided: September 24, 2007

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Before BRADLEY R. GARRIS, CHUNG K. PAK, and CHARLES F. WARREN, *Administrative Patent Judges*.

GARRIS, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134 the final rejection of claims 1, 6-22, 25, and 26. We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6(b).

We AFFIRM.

INTRODUCTION

Appellant discloses a method of coating the periphery of an optical element such that the peripheral coating has a sharply defined border

between the center aperture and the coated periphery, and the peripheral coating protects the adhesive holding the optical element in its holder from UV light (Specification ¶ [0007]).

Claims 1 and 26 are illustrative:

1. A method comprising:

(a) holding an optical element comprised of calcium fluoride so that a ring-shaped, peripheral portion of a face surface of incidence of the optical element is covered and a circular, central portion of the surface of the optical element is exposed;

(b) providing a first coating on the central portion of the face surface of incidence of the optical element;

(c) releasing the optical element from being held;

(d) providing a second coating over the central and peripheral portions of the face surface of incidence of the optical element; and

(e) substantially completely removing the first and second coatings from the central portion of the face surface of incidence of the optical element, whereby the central portion of the face surface of incidence forms a clear aperture.

26. A method, comprising:

(a) masking an optical element made from calcium fluoride so that a peripheral portion of a face surface of incidence of the optical element is covered and a central portion of the face surface of incidence of the optical element is exposed;

(b) providing a first coating on the central portion of the face surface of incidence of the optical element;

(c) unmasking the optical element;

(d) providing a second coating over the central and peripheral portions of the face surface of incidence of the optical element; and

(e) removing the first and second coatings from the central portion of the face surface of incidence of the optical element to form a clear aperture.

The Examiner relies on the following prior art references as evidence of unpatentability:

Elmore	US 4,315,044	Feb. 9, 1982
Daniels	US 4,619,504	Oct. 28, 1986
Vacha	US 5,714,196	Feb. 3, 1998
Haga	US 5,989,628	Nov. 23, 1999
Bauer	US 6,097,536	Aug. 1, 2000
Beavers	US 6,106,889	Aug. 22, 2000
Masuda	US 6,248,819 B1	Jun. 19, 2001
Kato	US 2001/0043320 A1	Nov. 22, 2001
Ikeda	US 2002/0098257 A1	Jul. 25, 2002
Bell	US 6,773,746 B1	Aug. 10, 2004

The rejections as presented by the Examiner are as follows:

1. Claims 1, 7, 12, 13, 17-19, 22, 25, and 26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bauer in view of Kao and Daniels.
2. Claims 6-10 and 13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bauer in view of Kato, Daniels and Beavers.
3. Claims 6, 7, 10, 13, and 14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bauer in view of Kato, Daniels and Haga.
4. Claim 11 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Bauer in view of Kato, Daniels, Haga and Ikeda.
5. Claim 15 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Bauer in view of Kato, Daniels, Haga and Vacha.

6. Claim 16 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Bauer in view of Kato, Daniels and Bell.
7. Claim 20 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Bauer in view of Kato, Daniels, Haga and Masuda.
8. Claim 21 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Bauer in view of Kato, Daniels, Haga, Masuda and Elmore.

The Examiner contends motivation is provided explicitly from the references for the combinations noted above (Answer 4-17). The Examiner further contends that both Kato and Daniels are in the same field of endeavor as Appellant's claimed invention (Answer 16).

Appellant separately argues independent claims 1 and 26, and dependent claims 6-22 and 25.

## OPINION

### CLAIMS 1 AND 26

Appellant argues that Kato and Daniels are non-analogous art because they are neither in the same field of endeavor as Appellant's claimed invention, nor reasonably pertinent to the problem Appellant was trying to solve (Br. 13-16). Appellant argues that there is no motivation to combine Bauer, Kato and Daniels absent impermissible hindsight (Br. 16-17). Appellant further argues that the Examiner's reasoning provided in support of the combination of Bauer in view Kato and Daniels amounts to an "obvious to try" rationale (Br. 17).

We have considered all of Appellant's arguments<sup>1</sup> and are unpersuaded for the reasons below.

Generally, one of ordinary skill in the art can look in the same or different field of endeavor when combining prior art teachings. *KSR Intl. Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1740, 82 USPQ2d 1385, 1396 (2007) (stating “When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one”). The field of endeavor is determined by considering applicant’s full disclosure (e.g., written description and claims) and weighing the full disclosure from the vantage point of the common sense likely to be exerted by one of ordinary skill in the art in assessing the scope of the endeavor. *In re Bigio*, 381 F.3d 1320, 1325-27, 72 USPQ2d 1209, 1212-13 (Fed. Cir. 2004). Moreover, “[i]f a reference disclosure has the same purpose as the claimed invention, the reference relates to the same problem, and that fact supports use of that reference in an obviousness rejection.” *In re Clay*, 966 F.2d 656, 659, 23 USPQ2d 1058, 1061 (Fed. Cir. 1992).

Appellant claims a method of coating a calcium fluoride optical element to form a peripheral coating on the optical element (claims 1 and 26). Appellant discloses that the “Field of Invention” is “. . . a method . . . for forming a clear aperture on an optical element held in an optical system”

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<sup>1</sup> Appellant copies independent claims 1 and 26 and states that none of the applied references, alone or in combination, teach or suggest the features of claims 1 and 26. “A statement which merely points out what a claim recites will not be considered an argument for separate patentability of the claim” 37 C.F.R. § 41.37(c)(1)(vii) (2006). In accordance with the aforementioned rule, we have not treated Appellant’s mere copying of claims 1 and 26 in the Brief as an argument.

(Specification ¶ [0001]). Appellant discloses that the coating method is needed to “define a sharp border for the clear aperture” (i.e., no peripheral coating on the clear aperture obscuring the light transmission) (Specification ¶¶ [0006] to [0007]).

From the above disclosures and the claims, we find Appellant’s field of endeavor includes methods of coating optical elements. *Bigio*, 381 F.3d at 1325-27, 72 USPQ2d at 1212-13. Appellant’s argument that the field of endeavor should be limited to forming peripheral coatings on calcium fluoride optical elements so as to leave a clear aperture is too narrow a field of endeavor in light of Appellant’s full disclosure and the common sense exerted by one of ordinary skill in the art having read Appellant’s disclosure. *Id.*

Moreover, we find that the purpose of Appellant’s claimed invention (i.e., the problem to be solved) is maintaining a clear aperture while providing a peripheral coating having a “sharp border” (i.e., sharply defined borders). *Clay*, 966 F.2d at 659, 23 USPQ2d at 1061.

Kato is directed to forming a TiO<sub>2</sub>, UV light absorbing coating on fluorite (i.e., calcium fluoride) optical elements (Kato ¶¶ [0063], [0064], [0087]).

Daniels discloses forming a coating on an optical element by applying a removable adhering substance (i.e., a first coating) having a particular design and applying an antireflective coating (i.e., a second coating) over the removable adhering substance (i.e., first coating) (Daniels, col. 3, ll. 52-68). Daniels further discloses that the first coating is removed to leave a void on the optical element (Daniels, col. 3, ll. 60-61, 67-68; col. 4, ll. 1-2). Daniels discloses that the prior art masking methods that leave a gap between the

mask and the optical element (i.e., the mask is not adhered to the surface of the optical element as is done in Daniels' method) are disadvantageous because "the marking will not be sharply defined at the edges thereof" (i.e., some of the peripheral coating will travel through the gap between the mask and the optical element and deposit on the clear aperture of the optical element) (Daniels, col. 1, ll. 64-68).

From Kato's and Daniels' disclosures, it is evident that both are in the same field of endeavor as Appellant's claimed invention. Kato and Daniels are directed to forming coatings on optical elements, which is the same as Appellant's field of endeavor. Moreover, it is clear from Kato's and Daniels' disclosures that both are reasonably pertinent to the problem to be solved by Appellant (i.e., providing an optical element with a coating with sharp borders and a clear aperture). Accordingly, Appellant's non-analogous art arguments are not persuasive.

Regarding Appellant's impermissible hindsight and "obvious to try" arguments, the Examiner has provided motivation directly from the references for combining Kato's step of coating the periphery of an optical element and Daniels' method of coating to form sharply defined edges with Bauer's process of peripherally coating optical element (Answer 5 and 7).

*In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998).

Furthermore, when a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. *KSR*, 127 S. Ct. at 1740, 82 USPQ2d at 1396. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. *Id.* For the same reason, if a technique

has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill. *KSR*, 127 S. Ct. at 1740, 82 USPQ2d at 1396. Often, it will be necessary for a Court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. *Id.* To facilitate review, this analysis should be made explicit. *Id.*, citing *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336-37 (Fed. Cir. 2006).

From the foregoing, design incentives to form a clear aperture and a peripheral coating with a sharp border on an optical element, would have prompted one of ordinary skill in the art, seeking to form Bauer's optical element with Bauer's peripheral UV absorbing coating, to look in either the same field of endeavor or different one. *KSR*, 127 S. Ct. at 1740, 82 USPQ2d at 1396. In the present case, one of ordinary skill would have been prompted to look to Kato's and Daniels' disclosures for relevant coating techniques to achieve the above stated goals in forming the peripheral coating on Bauer's optical element. Kato and Daniels disclose techniques to form a coating on an optical element having a more sharply defined border and to prevent coating the aperture of the optical element (Daniels, col. 1, ll. 64-68; Kato ¶ [0064]).

Moreover, there is nothing unpredictable in the combination of Daniels' coating techniques to produce a more sharply defined border and

Kato's limiting the coating to the peripheral regions to provide a clear aperture so as to increase UV light transmission through the aperture with Bauer's optical element coating method. *Id.* The combination of Daniels and Kato with Bauer predictably uses prior art techniques (masking, coating and removing the mask) according to their established functions (i.e., masking to provide a coating with a more sharply defined border). *Id.*

In fact, making such a combination would have been desirable because it produces coatings on optical elements having sharply defined borders and optical elements with increased light transmission and decreased contamination as disclosed by Daniels and Kato (Daniels, col. 1, ll. 64-68; Kato ¶¶ [0002], [0064]).

From the foregoing, we affirm the Examiner's § 103(a) rejection of argued claims 1 and 26.

#### DEPENDENT CLAIMS 6-22 AND 25

Various combinations of dependent claims 6-22 and 25 were rejected over different combinations of the applied prior art noted above in our presentation of the Examiner's rejections. Appellant has not provided arguments specific to any of the various rejections applied to dependent claims 6-22 and 25. Rather, Appellant broadly argues that the various secondary references are non-analogous art because they are not in the same field of endeavor and are not reasonably pertinent to the problem to be solved by Appellant (Br. 18). Appellant further argues that there is no reason to combine the secondary references with Bauer, Kato and Daniels absent impermissible hindsight (Br. 19).

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We have considered all of Appellant's arguments and not persuaded for the reasons below.

Regarding the non-analogous art argument, Appellant has not argued how any specific reference of the applied prior art is not in the same field of endeavor or reasonably pertinent to the problem to be solved. Based upon our review of the applied prior art, we find the applied prior art to be either in the same field of endeavor or reasonably pertinent to the problem to be solved.

Regarding Appellant's lack of motivation argument, the Examiner has provided reasons for the various combinations (Answer 4-16). Appellant's broadly stated argument is not a sufficient rebuttal of the Examiner's specific motivation determination.

For the above reasons, we also affirm the following rejections: (1) claims 7, 12, 13, 17-19, 22, and 25 under § 103(a) over Bauer in view of Kato and Daniels, (2) claims 6-10 and 13 under § 103(a) over Bauer in view of Kato, Daniels and Beavers, (3) claims 6, 7, 10, 13, and 14 under § 103(a) over Bauer in view of Kato, Daniels and Haga, (4) claim 11 under § 103(a) over Bauer in view of Kato, Daniels, Haga and Ikeda, (5) claim 15 under § 103(a) over Bauer in view of Kato, Daniels, Haga and Vacha, (6) claim 16 under § 103(a) over Bauer in view of Kato, Daniels and Bell, (7) claim 20 under § 103(a) over Bauer in view of Kato, Daniels, Haga and Masuda, and (8) claim 21 under § 103(a) over Bauer in view of Kato, Daniels, Haga, Masuda and Elmore.

## DECISION

The Examiner's decision is affirmed.

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

AFFIRMED

tf/ls

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