

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROBERT ANTHONY FUSARO, JR., and
TIMOTHY FRANCIS BETHEL

Appeal 2008-4288
Application 10/409,523¹
Technology Center 1700

Decided: November 13, 2008

Before THOMAS A. WALTZ, MARK NAGUMO, and
MICHAEL P. COLAIANNI, *Administrative Patent Judges*.

NAGUMO, *Administrative Patent Judge*.

DECISION ON APPEAL

¹ Application 10/409,523, *Method for Masking Selected Regions of a Substrate*, filed 8 April 2003 and claiming the benefit under 35 U.S.C. § 120 of an application filed 11 January 2002. The specification is referred to as the “523 Specification,” and is cited as “Spec.” The real party in interest is listed as General Electric Company (*Appeal Brief Pursuant to 37 C.F.R. §§ 41.31 and 41.37*, filed 31 October 2007 (“Br.”), 2.)

A. Introduction

Robert Anthony Fusaro, Jr., and Timothy Francis Bethel (“Fusaro”) timely appeal under 35 U.S.C. § 134(a) from the final rejection² of claims 23-28, 32-34, and 39-49. Claims 29-31 have been indicated to be allowable (FR 22), and claims 36-38 have been objected to as depending from rejected claims but allowable if rewritten in independent form (FR 23). We AFFIRM.

The subject matter on appeal relates to coating and masking techniques that are said to yield clean interfaces between coated and uncoated regions. Although none of the claims are so limited, the example and the primary interest concern the application of Thermal Bond Coats (“TBC”) to superalloy substrates that are components of turbine engines. According to the 523 Specification, it is imperative that certain surfaces, such as welding flanges, not be coated. The claimed invention is intended to cover methods of coating that are efficient and readily implemented on shaped articles.

Representative Claims 45 and 23 are reproduced from the Claims Appendix to the Principal Brief on Appeal:

Claim 45

A method, comprising:

physically defining a zone of non-adherence on a substrate,

wherein the zone of non-adherence is different than a coating area and a non-coating area;

applying a first coating on the coating area but not on the zone of non-adherence; and

² Office Action mailed 8 June 2007 (“FR”).

applying a second coating on both the coating area and the zone of non-adherence,

wherein the second coating adheres to the coating area but does not adhere to the zone of non-adherence.

(Claims App., Br. 34; indentation and paragraphing added.)

Claim 23:

A method for providing a clean edge

at the interface of a portion of a substrate coated with a coating system, and an adjacent portion of the substrate which is uncoated,

wherein the portion of the substrate which is uncoated comprises a zone of non-adherence,

wherein the coating system comprises two coatings,

said method comprising

forming the zone of non-adherence on the substrate between the portion of the substrate to be coated and the rest of the portion of the substrate which is to be uncoated, prior to application of the coating system,

wherein the zone of non-adherence is adjacent the interface so that the coating system will not adhere to the zone of non-adherence, but will adhere to the portion of the substrate which is to be coated with the coating system, and

applying the at least two coatings to coat the portion of the substrate to be coated

such that the zone of non-adherence is exposed to at least one but fewer than all of the at least two coatings,

such that the exposed coating directly contacts the substrate in the zone of non-adherence but does not adhere, and

wherein the zone of non-adherence is not exposed to a first of the at least two coatings.

(Claims App., Br. 32; indentation and paragraphing added.)

The Examiner has maintained the following grounds of rejection:³

- A. Claims 40, 41, and 43-49 stand rejected under 35 U.S.C. § 112(1), as lacking an adequate written description of the subject matter now claimed.
- B. Claims 39, 40, and 42-49 stand rejected under 35 U.S.C. § 112(2).
- C. Claims 23, 24, 27, 32, 40, 42, 43, and 45 stand rejected under 35 U.S.C. § 102(b) in view of McGraw.⁴
- D. Claims 23, 24, 27, 32, 40, 42, 43, and 45 stand rejected under 35 U.S.C. § 103(a) in view of McGraw.
- E. Claims 23, 24, 27, 32-34, 39, 40, 42, 43, 45, and 46 stand rejected under 35 U.S.C. § 103(a) in view of the combined teachings of Fry⁵ and Lindsay.⁶
- F. Claims 41, 44, 47, and 48 stand rejected under 35 U.S.C. § 103(a) in view of the combined teachings of Fry, Lindsay, and Nishioka.⁷
- G. Claims 23-28, 32-34, 39, 40, 42, 43, 45, and 46 stand rejected under 35 U.S.C. § 103(a) in view of the combined teachings of Honey,⁸ Fry, Lindsay, and the admitted state of the prior art.
- H. Claims 41, 44, 47, and 48 stand rejected under 35 U.S.C. § 103(a) in view of the combined teachings of Honey, Fry, Lindsay, Nishioka, and the admitted state of the prior art.

³ Examiner's Answer mailed 7 January 2008 ("Ans.").

⁴ Mary Jo McGraw, *Making Greeting Cards with Rubber Stamps* (1997).

⁵ James L. Fry et al., *Electroless Plating of a Metal Layer on an Activated Substrate*, United States Patent 5,925,415 (1999)

⁶ James H. Lindsay, *Evaporator Core Having Biocidal Fixture*, United States Patent 5,042,575 (1991).

⁷ Asaaki Nishioka and Kiyoshi Watanabe, *Method of Plating Hydraulically Hardened Material*, JP 61-210,181 (1986) (USPTO translation into English).

⁸ Francis John Honey et al., *Overlay Coating*, EP 0,288,156 A1 (1988).

B. Issue

The dispositive issue in this case centers on the scope of the claimed subject matter, in particular, on the interpretation of the terms “coating area,” “zone of non-adherence,” and “non-coating area.”

C. Findings of Fact

Findings of fact ("FF") throughout this Decision are supported by a preponderance of the evidence of record.

1. According to the 523 Specification, the discovered method provides “a clean edge at the interface of a portion of a substrate coated with a coating system and an adjacent portion of the substrate which is uncoated.” (Spec. 4:[0014].)

2. The method is said to include “the step of forming a zone of non-adherence (as described below) on the substrate portion which is to be uncoated, prior to application of the coating system.” (Spec. 4:[0014].)

3. The 523 Specification continues, “[t]he zone of non-adherence is adjacent the interface so that the coating system will not adhere to the zone of non-adherence but will adhere to the adjacent portion of the substrate which is to be coated with the coating system.” (Spec. 4:[0014].)

4. According to the 523 Specification, various techniques are known for achieving a clean edge between coated and uncoated sections of a substrate, including taping and masking, separately or together. (Spec. 2:[0007].)

5. Additionally, other techniques, including chemical masking, “in which a non-bonding coating (e.g., an ‘anti-bond’ material) is sprayed or painted on selected portions of the substrate. These types of non-bonding

materials prevent the protective coatings from permanently adhering to the substrate.” (Spec. 3:[0011].)

6. The 523 Specification provides an example based on applying a coating to a metallic substrate, such as a superalloy for a turbine engine. (Spec. 7:[0036].)

7. When the substrate is a nickel superalloy, the first coating is said to be usually a bond coat for a thermal barrier coating, which is said to have the composition MCrAl(X). (Spec. 11:[0053].)

8. For turbine engine articles, the second coat is said to be usually a ceramic coating, particularly a zirconia-based coating that may be blended with certain oxides. (Spec. 12:[0056].)

D. Discussion

The burden is on Fusaro, as the Appellant, to prove reversible error by the Examiner. Arguments not timely raised have been waived.

37 C.F.R. § 41.37(c)(1)(vii).

Written Description (New Matter)

The Federal Circuit has explained that a disclosure that satisfies the written description requirement of 35 U.S.C. § 112(1) must meet a higher standard than a disclosure that would suffice to render subject matter obvious:

[o]ne shows that one is ‘in possession’ of *the invention* by describing *the invention*, with all its claimed limitations, not that which makes it obvious. . . . the specification must contain an equivalent description of the claimed subject matter. . . . It is not sufficient for purposes of the written description

requirement of § 112 that the disclosure, when combined with the knowledge in the art, would lead one to speculate as to modifications that the inventor might have envisioned, but failed to disclose.

Lockwood v. American Airlines, Inc., 107 F.3d 1565, 1572 (Fed. Cir. 1997) (emphasis original, citations omitted). Whether the written description requirement has been met is a question of fact, *In re Ruschig*, 379 F.2d 990, 996 (CCPA 1967), which is therefore decided according to the preponderance of the evidence.

Claims 40, 43, and 45 (“physically defined”)

The Examiner finds that the requirement that the zone of non-adherence be a ‘physically’ defined region, as recited in claims 40, 43, and 45,⁹ all of which were added by amendment, is not adequately described in the original specification. (Ans. 4.)

With regard to claims 40 and 43, we observe that corresponding independent claims 23 and 32 require the step of “forming the zone of non-adherence on the substrate . . .”. As the Examiner noted (Ans. 4), dependent claims must further limit the parent claim.¹⁰ The step of forming the zone of non-adherence on the substrate requires that the zone be a “physically defined region” on the substrate. Since restating a limitation that is inherent

⁹ The claims dependent on claim 45 must also have this requirement.

¹⁰ 35 U.S.C. § 112(4) reads in relevant part, “a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.”

cannot introduce new matter to a claim, the rejection of claims 40 and 43 is REVERSED.

Similarly, regarding claim 45, it is not clear how the step of “physically defining a zone of non-adherence on a substrate” differs from the step of “forming the zone of non-adherence on a substrate.” Put another way, the Examiner has not shown how “physically defining a zone” on a substrate is somehow either broader or narrower than “forming a zone” on a substrate. In focusing on how many species of forming or physically defining a zone are described in the specification, both the Examiner and Fusaro appear to have overlooked the broad generic description in the record. Accordingly, the rejection of claim 45 is REVERSED.

Claim 45 (“different”)

The Examiner finds that the recitation in claim 45 that the “zone of non-adherence that is different than a coating area and a non-coating area” is not adequately described in the original specification. (Ans. 5-6.) More particularly, the Examiner finds no basis supporting a claim in which the zone of non-adherence can be non-adjacent to the coated portion of the substrate. (*Id.* at 6.)

In rebuttal, Fusaro cites several paragraphs of the specification and asserts, without elaboration, that adequate support is provided. (Br. 9.) In the Reply Brief, Fusaro quotes passages from some of the paragraphs cited, and passages from additional paragraphs, and urges that “[t]he original specification does not indicate that it is critical or essential to place the zone of non-adherence adjacent the interface . . .” (Reply Br. 6.)

Fusaro's arguments are not persuasive. Paragraph [0014] states that "[t]he method includes forming a zone of non-adherence (as described below)" and further that "[t]he zone of non-adherence is adjacent the interface, so that the coating system will not adhere to the zone of non-adherence, but will adhere to the adjacent portion of the substrate which is to be coated with the coating system." (Spec. 4:[0014].) Moreover, Fusaro argued in the Reply Brief, quoted *supra*, "the 'zone of non-adherence' is a non-roughened surface section 66, which is defined as the region between the coating surface 52 and the sheet 62." (Reply Br. 3.)

However, because paragraph [0014] of the 523 Specification, which provides the most general description of the zone of non-adherence, describes the zone of non-adherence as being adjacent to the coating section—and because there appears to be no explanation of how such a zone would be created, or would be useful, anywhere else—the absence of the statement of adjacency in claim 45 and the dependent claims does not broaden the scope of the claims. Accordingly, the claimed subject matter is, in this instance, fully described in the original specification, and the rejection of claim 45 on this basis is REVERSED.

Claim 46 ("more adhesive")

The Examiner finds that the recitation in claim 46, "making the coating area more adhesive," is not supported in the original specification by paragraphs [0038]-[0040]. (Ans. 6.)

Appellants argue that the disclosure in paragraphs [0038]-[0040] describe a specific example of a general adhesion promoting technique, and that the rejection should therefore be reversed. (Br. 6; Reply Br. 6-7.)

Paragraph [0038] states that the purpose of protective tape 60 “is to protect section 54 from the effects of an adhesion-promoting treatment, which is to be used on section 52” Accordingly, it is clear that a genus of adhesion-promoting treatments is described in the original specification, and the rejection of claim 46 is REVERSED.

Claims 48 and 49 (comprises metal or ceramic material)

The Examiner finds that the recitations in claim 48, that the first coating material “comprises” a metallic material, or that the second coating “comprises a ceramic material, or a combination thereof,” and that the recitation in claim 49 that the second coating “comprises” a zirconia-based material” lack adequate descriptions in the originally filed specification. According to the Examiner, the original specification describes the coatings more narrowly, e.g., the first coating can be a bond coat, and that it can be an MCrAl(X) material, and that the second coating can be a ceramic cover coat that can be zirconia-based. The Examiner argues that the class of more general coatings now recited are not described. (Ans. 6-7.)

Fusaro traverses, but does not raise any substantive arguments against these rejections. (Br. 10.) In particular, Fusaro has not directed our attention to a disclosure in the original specification that supports description of a first coating material as “comprising” a metal, i.e., being made of a metal and permitting the presence of other, unnamed ingredients of any other composition. Nor has Fusaro directed our attention to any similar disclosure regarding second coats and ceramics.

As Fusaro has not come forward with sufficient evidence to establish reversible error on the part of the Examiner, we AFFIRM the rejection of claims 48 and 49.

Claims 41, 44, and 47 (“spraying”)

The Examiner finds further that the limitation that the coating be applied by “spraying,” recited in amended claims 41, 44, and 47, is not adequately described in the original specification. (Ans. 4-5.) According to the Examiner, only more specific forms of spraying (i.e., “thermal spraying”) were described, and other possible spraying methods, such as electrostatic spraying, powder spraying, and liquid spraying, were not described. The Examiner concludes that an insufficient variety of species has been disclosed to permit the generic term in the claims. (*Id.* at 5.)

Fusaro again directs our attention to numerous paragraphs in the 523 Specification and asserts, without elaboration, that they support the now-recited application of the coatings by generic “spraying.” (Br. 8-9.) In the Reply Brief, Fusaro quotes in full, with emphasis, paragraphs [0042]-[0044] and [0053] from the Specification, and urges that because “[c]learly, the application of coatings is not limited to spraying techniques, much less thermal spraying techniques,” the rejection should be reversed.

Fusaro’s objections are not on point. The issue is not whether Fusaro described, in the originally filed specification, application techniques that are broader than spraying, but whether the originally filed specification describes the generic class of spraying techniques adequately that Fusaro should be permitted to introduce a claim covering all modes of spraying, not

merely the classes of “thermal spraying” or “plasma spraying” recited in the 523 Specification at page 11, paragraph [0053].

Again, the evidence advanced by Fusaro is insufficient to establish reversible error in the Examiner’s rejection. Accordingly, the rejection of claims 41, 44, and 47 is AFFIRMED.

Indefiniteness

The Examiner has determined that the recitation in claims 39, 42, and 45, that the zone of non-adherence is “different” than the coated and uncoated portions of the substrate is unclear as to what must be different. (Ans. 8.)

The Examiner has also determined that the recitation in claims 40, 43, and 45 that the zone of non-adherence is a “physically defined” region is unclear, especially as a further-limiting condition in claims 40 and 43.

The Examiner has further determined that the recitation in claim 44, “applying the at least two coatings comprises spraying a coating,” and the recitation in claims 47 and 48, applying first or second coatings by “spraying a material” are also “confusing as worded.” (Ans. 9.)

We shall not affirm any of these rejections for indefiniteness, as the “confusing” aspects of the claims as explained by the Examiner appear to be reasonably resolved simply by giving the phrases their common meaning. As Fusaro points out, it is hornbook patent law that breadth is not indefiniteness.

Accordingly, the rejections for indefiniteness are REVERSED.

Prior Art Rejections C and D, based on McGraw

The Examiner finds that McGraw describes a process in which a first coating (pigment ink) is applied to a substrate (notecard stock) in a first area; then a second coating (embossing powder) is applied over an area that encompasses the first area, but that is less than the entire notecard. (Ans. 10; FR 10, citing McGraw .) The Examiner finds that the powder sticks to the wet inked area, the excess powder is removed from the notecard. and the remaining powder is fixed to the card by heating the powder until it melts. (*Id.*) The Examiner identifies the area to which the ink pigment is applied as the coated area; the area to which the embossing powder is applied that does not have the ink pigment applied as the zone of non-adherence; and the area of the notecard to which the embossing powder is not applied as the uncoated area. (*Id.*) The Examiner finds that the zone of non-adherence is adjacent the interface of the coating system and the area of the substrate that is not coated. (*Id.*) Furthermore, the Examiner finds that the zone of non-adherence is exposed to at least one (the powder) of the coatings, but fewer than all of the coatings (the ink); and the exposed coating (the powder) does not adhere to the zone of non-adherence. (Ans. 11; FR 10-11.) In particular, the zone of non-adherence is not exposed to a first (the ink) of the at least two coatings. (Ans. 11; FR 11.) The Examiner finds further that, “[a]s shown on page 70 [of McGraw], the first stamped layers can also be formed with a mask, that would also prevent exposure of the first layer of coating from the stamp to the zone of non-adherence.” (*Id.*) (At page 70, McGraw shows a method of printing wherein an inked rubber stamp is pressed onto a substrate such that part of the inked image-transfer area of the stamp is pressed onto an area of the substrate that is to be coated, which part of the

inked image-transfer area of the stamp is pressed onto an area of the substrate that is masked.) With respect to claim 45, the Examiner makes similar findings: “[t]he zone of non-adherence is different than a coating area and a non-coating area . . . the non-coating area is the area of the substrate where no embossing powder is applied.” (*Id.* at 12.)

Fusaro argues that McGraw does not anticipate independent claims 23, 32, or 45 because McGraw “fails to teach or even suggest formation of three regions or portions, which have a coated portion, a zone of non-adherence, and an uncoated portion. . . . the McGraw reference discloses only two regions, but nothing defined in between.” (Br. 16, 17, and 18.) Fusaro founds its objections to the rejection for obviousness on the same grounds. (Br. 24.)

On review of McGraw, especially Figure 2 at 90, McGraw shows a drawing of a notecard that has been stamped with pigment ink, and powder poured on top of the image. McGraw instructs, “Pour the powder over the image. Be generous. It’s better to cover the image with a whole jar than to sprinkle the powder and not get good coverage.” The image quality is not excellent, but the drawing appears to show powder on all parts of the face of the notecard, although most of the powder is piled on top of the printed image. Accordingly, we shall not affirm the rejection for anticipation, as an uncoated region of the notecard is not clearly shown.

However, Fusaro’s argument is not persuasive of error in the rejection for obviousness. McGraw teaches that the embossing powder and notecard stock should be selected so the powder does not cling to the paper, “because once the powder is heated you can’t remove it.” (McGraw 89.) Thus, it

would have been obvious to a person having ordinary skill in the art to provide the three areas identified by the Examiner, namely the area coated with the ink pigment, the area coated with the powder, and the peripheral area of the card that is not coated with the powder, in order to provide the best quality card image as well as to use the embossing powder with good efficiency.

Fusaro has not explained why the Examiner's findings are erroneous. Moreover, Fusaro has not addressed the Examiner's finding that the placement of a mask on the notecard stock prior to the first step of applying embossing ink to the notecard stock with the stamp that partially obscures a portion of the inked stamp from the surface of the notecard stock, thereby forming a zone of non-adherence between the area to be coated and the area to be uncoated at the edge of the notecard.

Fusaro's additional argument that there is no motivation to modify McGraw to form the three recited regions (Br. 24) is without merit because there is no need to modify McGraw, as the claimed process is broad enough to read on embodiments obvious in view of McGraw. Fusaro's argument that McGraw teaches a different intended purpose and principle of operation (Br. 25) fails because the claimed process does not exclude the embodiments of the different purposes and principles of operation shown by McGraw. The "zone of non-adherence" is formed, in the example provided in the 523 Specification, by a series of masking, treatment, and coating steps. Similarly, McGraw teaches the formation of a zone of non-adherence by a series of steps, including selective treatment and, in one embodiment, by a masking step.

Accordingly, as Fusaro has not proved reversible error, the rejection for obviousness in view of McGraw is AFFIRMED.

Prior Art Rejections E, F, G, and H

The Examiner finds that Fry teaches a two-coating system. (Ans. 14.) The first coating is a layer of silyl hydride or monatomic metal that is applied to the substrate in a desired pattern. (*Id.*) The second layer is metal from the solution into which the substrate is dipped that reacts with the silyl hydride to form a monatomic metal layer, or metal that electrolessly plates onto the monatomic metal layer. (*Id.*) The Examiner notes that the electroless plating only occurs on the patterned areas, so adjacent to the pattern there is no deposition from solution. (*Id.*) The Examiner finds that “[t]he portion of the substrate which is uncoated comprises a zone of non-adherence (an area where coating is exposed but does not adhere)” (*Id.*) The Examiner finds that Fry teaches all the limitations of the independent claims “except that the zone of non-adherence is formed prior to coating and is specifically a zone between the coating system and a separate non-coated area of the substrate.” (Ans. 16.)

Similarly, the Examiner finds that Honey teaches methods of forming an overlayer thermal barrier coating on a turbine substrate with a two-coating system. (Ans. 19.) The first coating can be provided by electroless coating of an M_1CrAlM_2 layer. (*Id.*, citing Honey 1:25-40.) The second coating is a thermally sprayed thermal barrier ceramic coating. (*Id.*, citing Honey 3:30-40.) The Examiner finds that Honey describes processes that meet all the features of the independent claims “except the forming of the zone of non-adherence and its application as part of the application process.”

(Ans. 19.) The Examiner argues that the electroless plating process taught by Fry would be appropriate to use for plating the turbine parts as taught by Honey. (*Id.*)

In each case, the Examiner finds that Lindsay provides the missing limitations by teaching that, when performing electroless plating, it is known to partially immerse a substrate into the solution in order to treat selected areas of the substrate. (Ans. 16 and 20.) According to the Examiner, “[t]he zone of non-adherence would be determined before coating by routine experimentation as the location of the pattern to be coated would need to be determined” (Ans. 17.)

Fusaro argues that “Fry teaches only a coated portion and an uncoated portion without any mention of a portion in between (or different), much less a zone of non-adherence between the coated and uncoated portions.” (Br. 26.) Moreover, Fusaro argues that the Examiner’s reliance on Lindsay is inadequate because “the mere partial emersion [sic: immersion] of a substrate does not mean that a zone of non-adherence was formed on the substrate.” (Br. 27.)

These arguments are not persuasive of reversible error. Fusaro has not explained why the Examiner’s identification of the dipped, non-patterned region of the Fry substrate, which is determined by the necessary “routine experimentation” noted by the Examiner, is incorrect. The coated region is the region where metal is deposited. The uncoated region is the region that is not dipped. In between the coated and the uncoated region is the zone of non-adherence, which is exposed to the second coating solution, but on which no metal coating occurs. This “zone of non-adherence” meets

the limitation that it be “physically defined” or “formed.” The broadest reasonable meaning of this requirement is that the zone must be defined—distinguished from the coated zone and from the non-coated zone—by some physical action or process step. Here that step is partial submersion.

Attacking references individually, without explaining why the combination of the teachings is inadequate or improper, is not a valid rebuttal of a prima facie case of obviousness. *In re Merck & Co., Inc.* 800 F.2d 1091, 1097 (Fed. Cir. 1986) (“Non-obviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references.”) (citation omitted).

Fusaro does not raise separate arguments against Rejections F, G, and H. (Br. 28-29.) Accordingly, these Rejections stand or fall with Rejection E, which is AFFIRMED.

E. Summary

In view of the record and the foregoing considerations, it is:

ORDERED that the rejection of Claims 40, 43, 45, and 46 under 35 U.S.C. § 112(1), as lacking an adequate written description of the subject matter now claimed is REVERSED;

FURTHER ORDERED that the rejection of Claims 41, 44, and 47-49 under 35 U.S.C. § 112(1), as lacking an adequate written description of the subject matter now claimed is AFFIRMED;

FURTHER ORDERED that the rejection of claims 39, 40, and 42-49 under 35 U.S.C. § 112(2) is REVERSED;

FURTHER ORDERED that the rejection of claims 23, 24, 27, 32, 40, 42, 43, and 45 under 35 U.S.C. § 102(b) in view of McGraw is REVERSED;

FURTHER ORDERED that the rejection of claims 23, 24, 27, 32, 40, 42, 43, and 45 under 35 U.S.C. § 103(a) in view of McGraw is AFFIRMED;

FURTHER ORDERED that the rejection of claims 23, 24, 27, 32-34, 39, 40, 42, 43, 45, and 46 under 35 U.S.C. § 103(a) in view of the combined teachings of Fry and Lindsay is AFFIRMED;

FURTHER ORDERED that the rejection of claims 41, 44, 47, and 48 under 35 U.S.C. § 103(a) in view of the combined teachings of Fry, Lindsay, and Nishioka is AFFIRMED;

FURTHER ORDERED that the rejection of claims 23-28, 32-34, 39, 40, 42, 43, 45, and 46 under 35 U.S.C. § 103(a) in view of the combined teachings of Honey, Fry, Lindsay, and the admitted state of the prior art is AFFIRMED;

FURTHER ORDERED that the rejection of claims 41, 44, 47, and 48 stand rejected under 35 U.S.C. § 103(a) in view of the combined teachings of Honey, Fry, Lindsay, Nishioka, and the admitted state of the prior art is AFFIRMED; and

FURTHER ORDERED that 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

Appeal 2008-4288
Application 10/409,523

tc

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