UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HEINER PITZ, AXEL HAUCK,
WERNER ANWEILER, and PETER HACHMANN

Appeal 2008-0210
Application 10/813,937
Technology Center 2800

Decided: June 4, 2008

Before JOSEPH F. RUGGIERO, JOHN A. JEFFERY, and KARL EASTHOM, *Administrative Patent Judges*.

JEFFERY, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134 from the Examiner's rejection of claims 1, 4, 5, 9, 10, and 12-16. Claims 2, 3, and 6-8 have been indicated as containing allowable subject matter (Br. 4). We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

STATEMENT OF THE CASE

Appellants invented a method for drying printing ink on a substrate that is moved through a printing press. A treatment agent is applied to the substrate prior to applying the ink to accelerate drying the ink.[1] Claim 1 is illustrative:

> 1. A method for drying a printing ink on a printing substrate in a printing press comprising the steps of:
>
> using at least one printing ink to print on the printing substrate at a first position of a path, the printing substrate being moved along the path through the printing press; and
>
> applying a treatment agent at a second position of the path the printing substrate to accelerate drying of the printing ink on the printing substrate; [sic]
>
> the applying of the treatment agent at the second position occuring before the printing at the first position.

The Examiner relies on the following prior art references to show unpatentability:

Rodi	US 5,115,741	May 26, 1992
Broder	US 5,668,584	Sep. 16, 1997
Bär	US 6,401,358 B1	Jun. 11, 2002
Jung	US 2003/0066452 A1	Apr. 10, 2003
Doberenz	US 2003/0071863 A1	Apr. 17, 2003
Wilbur	US 2004/0189769 A1	Sep. 30, 2004 (filed Mar. 31, 2003)

[1] *See generally* Spec. ¶¶ 0013-0027.

1. Claims 1 and 4 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Wilbur and Jung.
2. Claims 1 and 4 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Jung and Broder.
3. Claims 9 and 10 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Jung and Bär.
4. Claims 1 and 5 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Doberenz and Jung.
5. Claims 12-16 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Jung, Bär, and Rodi.

Rather than repeat the arguments of Appellants or the Examiner, we refer to the Brief[2] and the Answer for their respective details. In this decision, we have considered only those arguments actually made by Appellants. Arguments which Appellants could have made but did not make in the Brief have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(vii).

OPINION

The Rejection of Claims 1 and 4 Over Wilbur and Jung

We first consider the Examiner's obviousness rejection of claims 1 and 4 over Wilbur and Jung. In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. *See In re Fine*, 837 F.2d 1071, 1073 (Fed. Cir.

[2] We refer to the most recent Brief filed November 9, 2006 throughout this opinion.

1988). In so doing, the Examiner must make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966).

Discussing the question of obviousness of a patent that claims a combination of known elements, the Court in *KSR Int'l v. Teleflex, Inc*., 127 S. Ct. 1727 (2007) explains:

> 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. If a person of ordinary skill can implement a predictable variation, §103 likely bars its patentability. 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. *Sakraida* [*v. AG Pro, Inc.*, 425 U.S. 273 (1976)] and *Anderson's-Black Rock*[, *Inc. v. Pavement Salvage Co*., 396 U.S. 57 (1969)] are illustrative—a court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions.

KSR, 127 S. Ct. at 1740. If the claimed subject matter cannot be fairly characterized as involving the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for the improvement, a holding of obviousness can be based on a showing that "there was an apparent reason to combine the known elements in the fashion claimed." *Id.* at 1740-41. Such a showing requires "some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. . . . [H]owever, the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *Id*. at 1741 (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

If the Examiner's burden is met, the burden then shifts to the Appellants to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. *See In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992).

Claim 1

Regarding independent claim 1, the Examiner's rejection essentially finds that Wilbur teaches every claimed feature except for printing in a printing press. The Examiner cites Jung as teaching this feature and concludes that the claimed invention would have been obvious to one of ordinary skill in the art at the time of the invention in view of the collective teachings of the references (Ans. 3-4).

Appellants argue that the Examiner's interpretation of the term "treatment agent" as including energy itself contradicts the Specification which identifies the treatment agent as separate from energy. According to Appellants, heat and radiation are not "treatment agents" as the term is interpreted in light of the Specification. Appellants note that the Specification describes "treatment agents" as physical substances deposited on a printing substrate (Br. 9-10).

Appellants also argue that there is no motivation to combine Wilbur with Jung since the devices are different and there is no teaching in either reference that Jung would increase the speed of drying as asserted (Br. 10).

The Examiner contends that the term "treatment agent" is not limited to physical substances, and can include radiant heat under the term's broadest reasonable interpretation. To support this assertion, the Examiner

cites a dictionary definition of "agent" which defines the term as "a force or substance that causes change." The Examiner then relies on another definition of "force" as "the capacity to do work or cause physical change." With these definitions, the Examiner concludes that heat is a "treatment agent" since "heat is a force that causes change" (Ans. 8-9).

The issues before us, then, are (1) whether heat is a "treatment agent" under the term's broadest reasonable interpretation in light of the Specification; (2) whether there is a reason to combine Jung and Wilbur to arrive at the claimed invention; and (3) whether the cited prior art teaches or suggests all limitations of independent claim 1.

For the following reasons, we answer the first question "no." However, because we answer the third question "yes" based on the teachings of the Jung reference, it is dispositive to our decision regarding the patentability of claim 1. Nevertheless, for the reasons that follow, we also answer "yes" to the second question.

In interpreting the term "treatment agent," we first turn to Appellants' Specification as it "is the single best guide to the meaning of a disputed term."[3] According to the Specification:

> At a second position, a treatment agent is applied to the printing substrate to accelerate the drying of the printing ink on the printing substrate. In other words, *the treatment agent is used as a catalyst* to accelerate the drying of the printing ink on the printing substrate or to accelerate the absorption of

[3] *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1321 (Fed. Cir. 2005) (en banc) ("[T]he specification is the single best guide to the meaning of a disputed term, and…acts as a dictionary when it expressly defines terms in the claims or when it defines them by implication.") (internal quotation marks and citations omitted).

> energy, in particular as a *direct catalyst*, which reduces the energy absorption required for drying the printing ink.

(Spec. ¶ 0014; emphasis added)

In the next paragraph, the Specification indicates that "[t]he *dosage and composition* of the treatment agent is to be selected as a function of the printing substrate material, of the printing ink to be used in printing, and of the processing parameters, application parameters, or process parameters" (Spec. ¶ 0015; emphasis added). Additionally, the Specification notes the following:

> The treatment agent may also be a catalyst, in particular a catalyst that is directly effective for the energy absorption, or a reaction initiator….The treatment agent may have a switching or triggering function: Its action may be such that the effect on the drying is first triggered in response to *the treatment agent interacting with the introduced energy*.

(Spec. ¶ 0018; emphasis added)

The clear import of this discussion is that the "treatment agent" is a physical substance that is applied to the printing substrate and interacts with introduced energy to accelerate the drying process, the dosage and composition of which is selected based on the particular printing materials and process parameters employed. That the Specification specifically refers to the *dosage and composition* of the treatment agent only reinforces our conclusion that it is a physical substance. Significantly, the Specification clearly distinguishes the treatment agent from the introduced energy -- energy to which the treatment agent interacts to accelerate drying.

In concluding that the recited "treatment agent" is a physical substance, we acknowledge that we must give the term its broadest reasonable interpretation in light of the Specification, and yet not unnecessarily import limitations from the Specification into the claims.[4] Nevertheless, we find the Specification's clear description of the "treatment agent" as a physical substance tantamount to an implicit definition of the term.[5] Therefore, our interpretation of the term "treatment agent" most naturally aligns with the Specification and is therefore the appropriate construction.[6]

With this interpretation, we turn to the prior art. Wilbur discloses a printing system for drying ink on a printable medium with a movable print head and at least one halogen lamp for irradiating the printable medium 22 and/or the platen 24 (Wilbur, Abstract). Heat is applied to the printable medium before ink is deposited thereon (Wilbur, ¶¶ 0039-40; Figs. 2-3, 6).

It is undisputed that Wilbur does not apply a treatment agent in the form of a physical substance. Rather, the Examiner takes the position that the heat applied in Wilbur before printing is the "treatment agent."

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[4] "[A]lthough the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments...[C]laims may embrace different subject matter than is illustrated in the specific embodiments in the specification." *Phillips*, 415 F.3d at 1323 (citations and internal quotation marks omitted).

[5] *See id.* at 1321 (noting that the specification "acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication.").

[6] *See id.* at 1316 ("The construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction.") (citations omitted).

But as we noted above, we do not agree that this interpretation of "treatment agent" reasonably comports with the Specification's implicit definition of the term which requires a physical substance. Consequently, we find the Examiner's reliance on Wilbur problematic. Nevertheless, Jung not only teaches applying a treatment agent in the form of a physical substance in the manner claimed, but also teaches or suggests all other limitations of claim 1.

Jung discloses a rotary printing machine with plural printing units. In one embodiment, two identical printing units I are disposed adjacent to each other. In this arrangement, the substrate to be printed first passes through the rightmost printing unit ("the upstream printing unit"), and then passes through the leftmost printing unit ("the downstream printing unit"). As shown in Figure 2, each printing unit I comprises (1) inked cylinders 1, 2; (2) applicator device 7 for applying a catalyst mixture to the printing material; and (3) a dryer device 8 located downstream from the applicator device (Jung, ¶¶ 0018, 0023-28; Fig. 2). With this arrangement, the printing ink is applied before the catalyst mixture in each printing unit I. However, the catalyst mixture may also be applied together with the ink (Jung, ¶¶ 0031-36).

Turning to the language of claim 1, we first note that the catalyst mixture applied to the substrate in Jung fully meets a "treatment agent" as claimed. As Jung indicates, the catalyst mixture accelerates the breakdown of inhibitors in the ink which ultimately accelerates the drying time (Jung, ¶¶ 0007, 0026). While this treatment agent is applied after applying the printing ink (or together with the ink) *in each printing unit I*, the scope of

claim 1 nonetheless does not preclude the overall functionality of both printing units operating together as shown in Figure 2.

That is, nothing in claim 1 precludes the recited "first position" in Jung as corresponding to the ink applied via cylinders 1, 2 in the *downstream* printing unit I. Nor does the scope and breadth of claim 1 preclude the recited "second position" in Jung as corresponding to the application of the catalyst mixture in the *upstream* printing unit I. With this interpretation, the treatment agent in Jung would therefore be applied *before* printing at the "first position."

Since we find that Jung fully meets the limitations of claim 1, we will sustain the Examiner's obviousness rejection of that claim based on the collective teachings of the cited prior art.[7]

Claim 4

We also are not persuaded by Appellants' argument that the collective teachings of the cited prior art do not disclose or suggest drying at a "chronologically later point in time" as set forth in claim 4 (Br. 10). We first note that the substrate in Jung is dried by a dryer device 8 located in the downstream printing unit I. Since this drying unit is located downstream from the inked cylinders and the applicator device (i.e., at a third downstream position), drying would therefore occur at a later point in time with respect to the printing and catalyst application steps.

[7] *See In re Meyer*, 599 F.2d 1026, 1031 (CCPA 1979) (noting that obviousness rejections can be based on references that happen to anticipate the claimed subject matter).

While Jung is short on specifics regarding the dryer device 8, it is nonetheless described as a "thermally active" dryer device that is adjacent to -- and at a distance from -- the cylinder 2 (Jung, ¶ 0022). In our view, utilizing radiant energy sources in connection with such a dryer device would have been well within the level of ordinarily skilled artisans, particularly in view of Wilbur's stated preference for such sources to dry ink. *See, e.g.*, Wilbur, ¶¶ 0036-0040, 0053-54. Moreover, as the Examiner indicates (Ans. 10), Wilbur teaches using radiant energy sources both before and after printing, and we find this teaching would have been reasonably applicable to the ink dryer device of Jung.

In light of these teachings, we find that using radiant energy sources for the subsequent drying step at the recited "third position" in Jung would have been well within the level of ordinary skill in the art and tantamount to the predictable use of prior art elements according to their established functions -- an obvious improvement. *See KSR*, 127 S. Ct. at 1740.

For the foregoing reasons, we will sustain the Examiner's rejection of claim 4.

The Rejection of Claims 1 and 4 Over Jung and Broder

We will also sustain the Examiner's rejection of claim 1 based on the disclosure of Jung for the reasons previously discussed. While we consider the Examiner's perceived difference between Jung and the claimed invention (Ans. 4) problematic, we nonetheless find that Jung discloses all limitations of claim 1. Our previous discussion regarding the disclosure of Jung applies equally here and we therefore incorporate that discussion by reference. We therefore sustain the Examiner's rejection of claim 1 on that basis.

Regarding claim 4, while Appellants nominally indicate that the claim is argued separately (Br. 11), Appellants present no substantive arguments or explanation why this claim is separately patentable apart from its dependence from claim 1. Nevertheless, we agree with the Examiner (Ans. 11) that radiant energy sources in Broder are used to heat the substrate after printing (Broder, Abstract; col. 6, ll. 14-16; col. 6, l. 50 - col. 7, l. 6; Figs. 1 and 2).

We also find that this teaching is reasonably applicable to the ink dryer device of Jung. As we noted previously, using radiant energy sources for the subsequent drying step at the recited "third position" in Jung would have been well within the level of ordinary skill in the art and tantamount to the predictable use of prior art elements according to their established functions -- an obvious improvement. *See KSR*, 127 S. Ct. at 1740.

For the foregoing reasons, we will sustain the Examiner's rejection of claims 1 and 4 over the collective teachings of the cited prior art.

The Rejection of Claims 9 and 10 Over Jung and Bär

Regarding representative claim 9,[8] the Examiner finds that Jung discloses all of the claimed subject matter including a conditioning apparatus that applies a treatment agent accelerating drying. The Examiner, however, notes that Jung does not disclose the drying device including at least one narrow-band radiant energy source emitting light of one wavelength in the near-infrared (near-IR) region as claimed. The Examiner cites Bär as

[8] Appellants argue claims 9 and 10 together as a group. *See* Br. 11-12. Accordingly, we select claim 9 as representative. *See* 37 C.F.R. § 41.37(c)(1)(vii).

teaching such a feature and concludes the claimed invention would have been obvious to ordinarily skilled artisans in view of these collective teachings (Ans. 5-6).

Appellants first argue that Jung does not disclose a conditioning apparatus including a narrow-band radiant energy source emitting light of one wavelength. Appellants also argue that Bär also does not disclose a narrow-band radiant energy source, but rather a halogen light source. Appellants further note that the specified wavelength range in Bär has several absorption bands and is not light of one wavelength as claimed (Br. 12).

The Examiner maintains that Bär discloses a narrow-band radiant energy source that is said to have a wavelength emission maximum of 0.8 to 2.0 µm. Although the Examiner acknowledges that Bär does not specifically state the bandwidth of such emissions, the Examiner nonetheless takes the position that even a 2.0 µm bandwidth is "narrow-band" given the current state of the art (Ans. 11-12).

The issue before us, then, is whether the collective teachings of Jung and Bär reasonably teach or suggest a narrow-band radiant energy source emitting light of one wavelength in the near-IR region as claimed. For the following reasons, we answer this question "yes."

At the outset, our previous discussion pertaining to the disclosure of Jung applies equally here and we therefore incorporate that discussion by reference. We further note that, unlike the previous rejections relying on Jung, we are in substantial agreement with the Examiner's interpretation of Jung as articulated in this rejection, as well as the perceived differences between Jung and the claimed invention (Ans. 5).

Turning to the language of claim 9, we note that the scope and breadth of the last clause of the claim is *not* limited to the energy source emitting *only* one wavelength of light in the near-IR region. Rather, the claim merely calls for the energy source to emit light of *one wavelength* in the near-IR region: a limitation that does not preclude additional wavelengths so long as one wavelength falls within the near-IR region.

Indeed, Appellants' Specification all but confirms this point. According to the Specification, "[t]he radiant energy source should emit *one wavelength* that corresponds to the absorption of the infrared absorber, or a plurality of wavelengths that correspond to the absorption of the infrared absorber, *in particular* <u>*only*</u> *this one or this plurality of wavelengths*" (Spec. ¶ 0027; emphasis added).

The clear import of this discussion is that emitting light of one wavelength in the desired region is a distinct embodiment from emitting light at multiple wavelengths in that region. Further, the Specification implies that emitting *only one* wavelength in the desired region is a preferred implementation of the first embodiment (emitting one wavelength of light in the desired region). *See, e.g.*, Spec. ¶ 0029 (describing embodiment of energy source where emissions can occur at four wavelengths in a desired region (870 nm, 1050 nm, 1250 nm, and 1600 nm respectively)). Thus, the fact that claim 9 did not specifically recite emitting *only one* wavelength in the near-IR region therefore evidences an apparent intent to not be limited to such a preferred embodiment.

With this interpretation, we turn to the disclosure of Bär. It is undisputed that Bär discloses a drying device that emits radiation in the near-IR region, in particular radiation with wavelength emission maximum

of 0.8 to 2.0 µm (Bär, col. 2, ll. 53-63; col. 5, ll. 10-21; col. 6, ll. 28-34; Fig. 2). Since at least one emitted wavelength falls within the near-IR region, the energy source therefore emits radiation of one wavelength in this region.

Bär is silent regarding the bandwidth of these emissions, however. To interpret the term "narrow-band radiant energy source," we once again turn to Appellants' Specification for guidance. According to the Specification, "[i]n one advantageous embodiment, the radiant energy source is a narrow-band source: In this case, the radiant energy source *may* emit, *for example*, up to ± 50 nm width, preferably less than ± 50 nm width about a wavelength…." (Spec. ¶ 0029; emphasis added).

Although the specific bandwidth of ± 50 nm is discussed in connection with a narrow-band radiant energy source, based on the passage taken as a whole, such a range is merely an exemplary embodiment of such an energy source. Such a preferred embodiment by no means imparts a limitation on the broadest reasonable interpretation of a "narrow-band radiant energy source."

Notwithstanding Bär's silence regarding the bandwidth of the radiant energy emissions, Bär does indicate that a spectral filter can be disposed between the halogen line-sources 10 and the substance to be dried (Bär, col. 6, ll. 32-34). As is well known in the art, spectral filters can narrow the emissions of radiant energy to particular narrow bands of wavelengths. Indeed, Appellants' own Specification evidences this point. *See* Spec. ¶ 0034 (noting that broadband light sources with suitable filter systems can be used in lieu of lasers to provide a narrow-band radiant energy source). In our view, using such a filter in Bär to provide a narrow-band energy source would have been well within the level of ordinary skill in the art and

tantamount to the predictable use of prior art elements according to their established functions -- an obvious improvement. *See KSR*, 127 S. Ct. at 1740.

For the foregoing reasons, Appellants have not persuaded us of error in the Examiner's rejection of representative claim 9. Therefore, we will sustain the Examiner's rejection of that claim, and claim 10 which falls with claim 9.

The Rejection of Claims 1 and 5 Over Doberenz and Jung

We will also sustain the Examiner's rejection of claims 1 and 5 over the collective teachings of Doberenz and Jung. While we find the Examiner's reliance on the printer peripheral of Doberenz as well as curing the deficiencies of Doberenz via the disclosure of Jung (Ans. 6-7) problematic, we nevertheless find that the disclosure of Jung discloses all limitations of claim 1 as we indicated previously. Our previous discussion pertaining to the disclosure of Jung applies equally here and we therefore incorporate that discussion by reference.

Regarding claim 5, the Examiner is correct (Ans. 13) that Jung's treatment agent is a mixture. *See, e.g.*, Jung ¶ 0026 (referring to a catalyst mixture). Although the Examiner has not clearly shown that such a mixture inherently includes a binding agent to bind the mixture as the Examiner asserts, Appellants nonetheless have not rebutted this assertion apart from merely asserting that Jung does not disclose the limitations of claim 5 (Br. 14). Such summary assertions fall well short of persuasively rebutting the Examiner's prima facie case of obviousness or showing error in the Examiner's position.

In any event, we note that the purpose of the catalyst mixture is to accelerate the breakdown of the inhibitors in the ink which accelerates the crosslinking process. This reaction ultimately accelerates the drying process (Jung, ¶¶ 0002; 0026; 0031). In our view, the fact that a chemical reaction occurs between the catalyst mixture and the ink to break down the ink's inhibitors in Jung suggests that some sort of chemical binding occurs between the respective compounds in the ink and the catalyst. Therefore, ordinarily skilled artisans would recognize that the catalyst mixture would reasonably include a binding agent to facilitate this reaction.

For the foregoing reasons, Appellants have not persuaded us of error in the Examiner's rejection of claims 1 and 5 based on the collective teachings of the cited prior art. Therefore, we will sustain the Examiner's rejection of those claims.

The Rejection of Claims 12-16 Over Jung, Bär, and Rodi

Regarding claims 12-16, the Examiner adds the disclosure of Rodi for teaching a laser light source and multiple radiant energy sources arranged as claimed (Ans. 7-8). With respect to representative claim 12, Appellants argue that the lasers in Rodi are in the ultraviolet (UV) range -- not the IR range -- and therefore teach away from the near-IR region as claimed (Br. 14). Appellants add that there is no motivation or teaching to use Rodi's lasers to modify Jung or Bär. According to Appellants, the Examiner's proffered motivation of providing sufficient heat via a new heat source is based on hindsight since Jung already provides sufficient heat (*Id.*).

The Examiner notes that Rodi was not relied upon for the particular wavelength range emitted by the laser sources in the reference, but rather the

general teaching of using lasers which provide, among other things, a very confined beam (Ans. 14).

We will sustain the Examiner's rejection of claim 12 essentially for the reasons indicated by the Examiner. As the Examiner indicates, skilled artisans would understand that lasers have a very confined beam of radiation as compared to other radiation sources. As such, skilled artisans would recognize that lasers would therefore facilitate irradiation of only those areas of the substrate that need to be irradiated (i.e., for drying ink), while avoiding irradiating other parts of the substrate. *See* Rodi, col. 3, ll. 15-22. Such a technique would, among other things, minimize collateral radiation (and possible damage) to areas that were not intended to be irradiated.

This teaching, in our view, would have been readily applicable to the ink drying apparatus of Jung and Bär. While Rodi does teach that the lasers are in the UV range, they are so employed due to the particular type of ink used (UV ink) that dries without unnecessary heating (Rodi, col. 2, ll. 54-62). However, Rodi also teaches that the radiation source is selected in accordance with at least one characteristic of an ink to be dried (Rodi, col. 3, ll. 44-48). In our view, selecting a radiation source in the near-IR region that is commensurate with ink whose drying characteristics (i.e., radiant energy absorption, etc.) were likewise optimized for near-IR wavelengths would have been well within the level of ordinary skill in the art and tantamount to the predictable use of prior art elements according to their established functions -- an obvious improvement. *See KSR*, 127 S. Ct. at 1740.

Regarding claims 14-16, Appellants reiterate that there is no motivation to use Rodi's lasers to modify the cited prior art (Br. 15).

However, we are not persuaded by this argument for the reasons noted above and find ample reason to combine the references' teachings.

For the foregoing reasons, Appellants have not persuaded us of error in the Examiner's rejection of claims 12-16. Therefore, we will sustain the Examiner's rejection of those claims.

DECISION

We have sustained the Examiner's rejections with respect to all claims on appeal. Therefore, the Examiner's decision rejecting claims 1, 4, 5, 9, 10, and 12-16 is affirmed.

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

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