

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ORRIN D. CHRISTY

Appeal No. 97-0178
Application No. 08/355,326¹

ON BRIEF

Before THOMAS, HAIRSTON, and DIXON, **Administrative Patent Judges**.
DIXON, **Administrative Patent Judge**.

DECISION ON APPEAL

This is a decision on appeal from the Examiner's final rejection of claims 1-3, 5, 7-11, 13-22, and 24-26², which are all of the claims pending in this application.

We AFFIRM-IN-PART

¹ Application for patent filed December 12, 1994.

² The Examiner indicated in the Examiner's answer that the rejection of claims 8 and 16 is withdrawn and that these two claims would be allowable if rewritten in independent form.

BACKGROUND

The appellant's invention relates to a substrate which receives and retains imaging thereon. The imaging being a first machine readable code imaged on the substrate. The first code is opaque to a first predetermined wavelength of electromagnetic energy (infra-red) and transparent to a second predetermined wavelength of electromagnetic energy (visible light). An overlay security block is also provided which substantially completely covers and visibly obscures the first code. The overlay is transparent to the first predetermined wavelength and opaque to the second wavelength of electromagnetic energy. The security block may also be a second bar code. An understanding of the invention can be derived from a reading of exemplary claim 1, which is reproduced below.

1. A substrate capable of receiving and retaining imaging thereon, comprising:

a first machine readable identification code imaged on a predetermined area of said substrate, said first code opaque to a first predetermined wavelength range of electromagnetic energy and transparent to a second predetermined wavelength range of electromagnetic energy different from the first range; and

an overlay imaged over and at least partially covering said first code, said overlay transparent to said first predetermined wavelength range of electromagnetic energy and opaque to the second predetermined wavelength range of electromagnetic energy different from the first range; and

wherein said overlay comprises a security block substantially completely covering and visibly obscuring the first code.

Appeal No. 97-0178
Application 08/355,326

The prior art references of record relied upon by the Examiner in rejecting the appealed claims are:

Diekemper et al. (Diekemper)	4,694,148	Sep. 15, 1987
Fisun et al. (Fisun)	5,401,960	Mar. 28, 1995
		(Filed Dec. 03, 1993)

Claims 1-3, 5, 7, 9-11, 13-15, 17-22, and 24-26 stand rejected under 35 U.S.C. § 103 as being unpatentable over Fisun in view of Diekemper.

Rather than reiterate the conflicting viewpoints advanced by the Examiner and the appellant regarding the above-noted rejections, we make reference to the Examiner's answer (Paper No. 10, mailed Aug. 7, 1996) for the Examiner's complete reasoning in support of the rejections, and to the appellant's brief (Paper No. 8, filed May 14, 1996) and reply brief (Paper No. 11, filed Sept. 24, 1996) for the appellant's arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellant's specification and claims, to the applied prior art references, and to the respective positions articulated by the appellant and the Examiner. As a consequence of our review, we make the determinations which follow.

Appellant has nominally indicated that the claims do not stand or fall together (brief, page 4), but he has not specifically argued the limitations of each of the claims. To the

Appeal No. 97-0178
Application 08/355,326

extent that appellant has properly argued the reasons for independent patentability of specific claims, we will consider such claims individually for patentability. To the extent that appellant has made no separate arguments with respect to some of the claims, such claims will stand or fall with the claims from which they depend. **Note In re King**, 801 F.2d 1324, 1325, 231 U.S.P.Q. 136, 137 (Fed. Cir. 1986); **In re Sernaker**, 702 F.2d 989, 991, 217 U.S.P.Q. 1, 3 (Fed. Cir. 1983). Appellant separates claims 1 and 2 into a first group; claims 11, 15, 17 and 19 into a second group; and claims 7, 9, and 24-26 into a third group which stand or fall together.

The Examiner generally summarizes appellant's arguments on pages 19-20 of the answer:

[T]he examiner contends that the underlying question relative to all of these arguments is whether or not it would have been obvious that an ultraviolet bar code, its materials, and an appropriate scanner is interchangeable with an infra-red bar code, its materials and an appropriate scanner as seen in context with the current claims. (answer at page 19).

We agree with the Examiner concerning the basic underlying issue concerning appellant's arguments. We have reviewed the references and the Examiner's line of reasoning concerning the obviousness of using the infra-red spectrum in place of the ultraviolet spectrum as disclosed by Fisun. We are in agreement with the line of reasoning set forth by the Examiner, but we agree with appellant's argument with respect to claim 22.

In our view, the Examiner's analysis is sufficiently reasonable and complete to the extent that we find the Examiner has satisfied the burden of presenting a ***prima facie*** case of obviousness. That is, the Examiner's analysis, if left unrebutted, would be sufficient to support a rejection under 35 U.S.C. § 103. The burden is, therefore, upon appellant to come forward with evidence or arguments which persuasively rebut the Examiner's ***prima facie*** case of obviousness. Appellant has presented several substantive arguments in response to the Examiner's rejection. Therefore, we consider obviousness based upon the totality of the evidence and the relative persuasiveness of the arguments.

We find that the Examiner has set forth a ***prima facie*** case of obviousness by setting forth motivation for skilled artisans to use the infra-red spectrum rather than the ultraviolet spectrum. The Examiner has set forth the text of the rejection in the final rejection, Paper No. 6. (See Final Rejection at pages 2-6.) The Examiner relies upon the Fisun patent to teach the use of two bar codes which overlap each other. One of the bar codes is in the visible range of light and the other is in the ultraviolet (non-visible) range of light. The Examiner states that the skilled artisan would have been motivated to use infra-red light rather than the ultraviolet because "infra-red light would perform substantially the same purpose in substantially the same way without any adverse effects to the system. . . . It would have been obvious to a person of ordinary skill in the art at the time the invention was made to print the bar code in any of the known methods." (See final

rejection at page 4.) The Examiner's statements of the motivation and the lines of reasoning for the combination and/or the modification of the Fisun reference is quite extensive. Taking the rejection and responses to the arguments as a whole, we agree with the Examiner that it would have been obvious to one of ordinary skill in the art at the time of the invention in view of the teachings of Diekemper to use the well known infra-red spectrum of light rather than the ultraviolet spectrum of light to encode a second bar code for security purposes.

CLAIM 1

The Examiner has directed our attention to the Diekemper reference to teach the well known use of infra-red encoding and detection in the hotel door lock environment. Here, both well known ultraviolet and infra-red light are used. The key cards are reencoded using ultraviolet light, but the doors use infra-red detectors to detect the codes on the card. Diekemper is advanced by the Examiner as a teaching of the well known use of either ultraviolet or infrared spectrum of light. We agree. The Examiner relies upon a laminate layer which is transparent to infra-red light, but opaque to visible light as a teaching of providing a security covering. (See Diekemper at col. 1-2; answer at page 6.) Diekemper discloses that the infra-red receivers and emitters are necessary when using the infra-red spectrum. (See Diekemper at col. 3-4.)

Appellant argues that Fisun and Diekemper do not disclose the “equivalency of infra-red or ultraviolet light.” (See brief at pages 6 and 7, respectively.) We agree with appellant regarding the equivalency of infra-red or ultraviolet light, but we agree with the Examiner that claims 1 and 2 do not require infra-red light. Therefore, argument thereto is not persuasive. With respect to claim 2, the Fisun patent discloses the use of light in the visible range. In general, the Examiner’s position appears to be that either ultraviolet or infra-red spectrum of light may be used to hide or obscure codes for security reasons rather than that the two spectrum’s of light are "equivalent." (See answer at pages 10-13.) From a review of the prior art and level of skill in the relevant art, we agree with the Examiner. The skilled artisan would have known of the difference between the two spectrums of light and selected appropriate codes, materials and scanners based upon the selected spectrum of light to be used.

Appellant argues that Diekemper does not teach “an image on a substrate.” (See brief at pages 7 and 13.) We agree with respect to Diekemper, but the Examiner discusses the use of images and printing on the substrate with respect to the Fisun patent. (See Final rejection at page 7; answer at page 13; Fisun at col. 4.) Appellant further argues that the combination of Fisun and Diekemper would not produce a code imaged on an area thereof and a security block imaged over and completely covering and visibly

obscuring the first code.³ (See brief at page 8; reply at page 2.) The Examiner addresses this argument on pages 7-8 of the answer. We agree with the Examiner that Fisun teaches a second code over the first code. This second code would thereby cover and obscure the first code. Furthermore, depending on the specific code of information, the code may substantially completely cover the first code as taught by the layer in Diekemper for security purposes.

Appellant's argument on page 3 of the reply brief compares each individual teaching to the language of the claim and concludes that each individual teaching does not teach the invention as claimed. We agree with these statements, but the proper question is what does the combination of the references teach or would have fairly suggested to the skilled artisan. As discussed above, the combination teaches and would have fairly suggested the invention as set forth in the language of claim 1.

Appellant further argues that a "layer is not the same thing as imaging." (See reply brief at page 2.) (Emphasis in original.) We agree, but reference the above discussion concerning "imaging." Furthermore, we note that claim 1 does not require the "same type

³ We note that claim 1 includes two limitations which do not completely agree, the "overlay imaged over and at least partially covering said first code" and the "security block substantially completely covering and visibly obscuring the first code." One implies limited coverage and the other implies almost total coverage. Furthermore, it is questioned how the security block "visibly" obscures the first code which is not visible in the visible spectrum (claim 2).

of printing” or imaging process for both code(s) and overlay as appellant argues. (**Id.**)

The benefits asserted by appellant do not necessarily follow from the invention as claimed.

Different methodologies may still have been required depending on the codes and materials used. Therefore, this argument is not persuasive as discussed above.

Furthermore, we do not agree with appellant that the Examiner has “isolate[d] one particular teaching in Diekemper.” (See reply brief at page 2.) The answer and final rejection have clearly set forth the Examiner’s position with respect to the combination of the teachings of the two references and the motivations for the combination of teachings.

Both references teach the basic aspect of the claimed invention that when encoding additional data it is further desirable to have the additional data encoded so that it is not visible within the visible range of the spectrum.

With respect to claims 1 and 2, appellant argues that Fisun does not discuss “the suitability of infra-red light . . . but rather in the specification . . . specifically refers to UV light. . . . Fisun et al. provide no teaching whatsoever of either the use of a security block . . . and either a security block or bar coding overlaid one over the other.” (See brief at page 6.) As discussed above, Fisun teaches the use of two codes, one overlaid on the other.

Appeal No. 97-0178
Application 08/355,326

The second bar code may be deemed a security block or the teaching of Diekemper concerning the layer which is not transparent to visible light would have been a motivation for the use of a “security block.” This argument by appellant is unconvincing because it improperly attacks the references individually rather than addressing their collective teachings. **In re Keller**, 642 F.2d 413, 425, 208 U.S.P.Q. 871, 881 (CCPA 1981).

We agree with the Examiner that claims 1 and 2 do not include any limitation to the use of infra-red light, therefore arguments thereto by appellant are not persuasive.

We will sustain the rejection of claims 1 and 2.

CLAIM 11, 15, 17 and 19

With respect to appellant’s argument concerning the differences between the ultraviolet spectrum and the infra-red spectrum (brief at pages 8-11), we agree with appellant concerning mere equivalence, but it appears that the Examiner’s intent was to focus on the non-visible aspect and functionality of these two ranges rather than the inherent differences between the two ranges of the spectrum. Once the skilled artisan was motivated to have a second code or security covering which was visible in a second range of light, the skilled artisan would have been motivated to use a layered or stacked orientation with the first code. (See answer at pages 7-13.) The skilled artisan would have

found the well known ultraviolet range, the infra-red range along with other known non-visible coding schemes using other types of radiation. These types of radiation are equivalent in the sense that they are not visible in the ordinary visible range of light. The Examiner states that "[o]ne might be motivated to choose infrared instead of ultraviolet because of the infra-red laser diodes common in scanners are readily available. One might be motivated to choose infra-red in order to avoid interference from stray ultraviolet light which may be emanating from other apparatus." (See answer at page 10.)

Furthermore, appellant's specification admits of the well known use of Helium-Neon laser scanners which read in the infra-red range of light. (Specification at page 1.)

Appellant argues that Fisun "specifically require[s] UV." The Examiner agrees, but argues that the combination of the teachings rather than the individual teachings would have motivated the skilled artisan to use the infra-red spectrum. (See answer at pages 12-13.) We agree with the Examiner as discussed above.

Appellant argues that the Examiner has not set forth a ***prima facie*** case of obviousness with respect to the rejection of claim 11. (See reply brief at pages 3-4.) We disagree with appellant and find that the Examiner has set forth a ***prima facie*** case of

obviousness with respect to the rejection of claim 11. Furthermore, to determine the level of skill in the art, we have reviewed the references cited, but not applied against the claims and find that these other references disclose the use of infra-red spectrums of light. (E.g., Bianco, 4,359,633; Rudland, 4,678,898; Miller, 4,889,367, Storch et al., 5,367,148 referencing Dolash et al., 4,983,817 in col. 23.) We disagree with appellant that the Examiner has based the rejection upon impermissible hindsight reconstruction. (See reply brief at page 5.)

Therefore, we will sustain the rejection of claim 11 and claims 15, 17 and 19 which have been grouped with claim 11.

CLAIMS 3, 7, 9 AND 24-26

Appellant argues that both the first code and the overlay are imaged and that the overlay is transparent to infra-red light. (See brief at page 12.) This has been discussed above. We agree with the Examiner. Therefore, we will sustain the rejections of claims 3 and 24. Further, we will sustain the rejection claims 7, 9, 25 and 26 which have been grouped with claim 24.

CLAIMS 20 AND 21

Appellant argues that neither of the two references teaches that two scanners are “mounted immediately adjacent to each other so that by [a] single pass relative movement [between a substrate and] the scanner heads read[s] infra-red wavelength range machine readable code and visible light range machine readable code at the same time.” (See brief at page 12.) We agree with appellant concerning the argument, but the rejection is based upon the combined teachings and the motivation and knowledge of the skilled artisan as discussed above. We agree with the Examiner that it would have been obvious to one of ordinary skill in the art at the time of the invention

to use the infra-red scanner as taught by Diekemper in the dual scanner orientation of Fisun for simultaneous detection of plural codes at different wavelengths. Fisun discloses reading the codes in a single reading cycle. (See col 5.) Therefore, we will sustain the rejection of claims 20 and 21.

CLAIMS 5, 10 AND 18

Appellant argues that Diekemper does not address the manner in which the security block is formed. (See brief at page 12 and reply brief at page 1.) We agree, but the Examiner has relied upon Fisun to teach the imaging and the use of coherent, high intensity pulsed radiation. (See answer at page 15; Fisun at col. 3.) The Examiner argues that this technique falls within the electrophotographic method set forth in the alternative in

Appeal No. 97-0178
Application 08/355,326

the language of the claims. We agree with the Examiner and Fisun further discloses the codes may be “print[ed] on . . . the surface of the article.” (See col. 4.) An ink jet printer would have been one of the most common devices to print on a substrate or paper.

Therefore, we will sustain the rejection of claims 5, 10 and 18.

CLAIMS 13 AND 14

Appellant argues that the “overlay substantially completely cover[s] the first code.” We disagree with appellant, as discussed above, with respect to claim 1 concerning the overlay and with respect to claim 5 concerning the print methodology. Therefore, we will sustain the rejection of claims 13 and 14.

CLAIM 22

Appellant argues the mere fact that scanner wands per se are known does not make it obvious to use them in the combination set forth in independent claim 21. (See brief at page 14.) We agree with appellant. The Examiner has merely stated that the “skilled artisan would recognize the ability to use known wand scanners to read

these codes.” We disagree. The Examiner has not provided any evidence or convincing line of reasoning as to why it would have been obvious to have the “mounting means comprises a portable housing, and said first and second scanner heads comprise scanner wands.”⁴ Therefore, we will not sustain the rejection of claim 22.

CONCLUSION

To summarize, the decision of the Examiner to reject claims 1-3, 5, 7, 9-11, 13-15, 17-21, and 24-26 under 35 U.S.C. § 103 is affirmed. The decision of the Examiner to reject claim 22 under 35 U.S.C. § 103 is reversed.

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

AFFIRMED-IN-PART

JAMES D. THOMAS)

⁴ We do note that the PTO “Patent Application Locating and Monitoring” (PALM) system did use single wand scanners for many years during the 1980’s which were later replaced by hand held scanning guns. See also page 1 of the specification discussing well known readers including wand scanners.

Appeal No. 97-0178
Application 08/355,326

NIXON & VANDERHYE
1100 NORTH GLEBE RD 8TH FLOOR
ARLINGTON , VA 22201-4714