The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 10

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte J. RICHARD ANDERSON, LARRY G. JONES,
DAVID SHAFER, and JAMES E. GIBSON

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Appeal No. 1998-0160
Application No. 08/529,330

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ON BRIEF

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Before KRASS, JERRY SMITH, and BLANKENSHIP, Administrative Patent Judges.

BLANKENSHIP, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's final rejection of Claims 1-7, 9-12, and 14-26, all the claims remaining in the application.

We reverse.

BACKGROUND

The invention is directed to a combined day and night sighting apparatus, which may be further combined with a laser rangefinder apparatus. Claim 1 is reproduced below.

1. An integrated day and night sighting system comprising:

a daylight optical system having daylight optics for collecting and focusing visible light from an objective lens onto an eyepiece lens assembly in a daylight path between said objective lens and said eyepiece lens assembly;

a night light corrector lens mounted adjacent said daylight objective lens, said night correction lens including a pair of tilted lens elements to compensate for astigmatism;

an image converter for night light use and being movably supported for movement into and out of the daylight light path between a daylight position out of the light path and a night light position in the light path, said image converter being positioned for said eyepiece lens assembly to focus thereon when said image converter is in said light path;

a night reticle display positioned between said image converter and said eyepiece lens assembly;

a night light primary mirror positioned to reflect light from said night light corrector lens; and

a night light secondary mirror positioned to receive light from said night primary objective mirror and to focus the light onto said image converter when said image converter is in a night light position, whereby an integrated night and day light optical system is provided in a compact packaging.

The examiner relies on the following references:

Schmidt et al. (Schmidt '757)	3,464,757	Sep. 2, 1969
Traeger et al. (Traeger)	4,260,217	Apr. 7, 1981
Godfrey et al. (Godfrey)	4,422,758	Dec. 27, 1983
Schmidt (Schmidt '905)	4,626,905	Dec. 2, 1986
Hatfield, Jr. (Hatfield)	5,025,149	Jun. 18, 1991
Owen	5,497,266	Mar. 5, 1996

Japanese Kokai Patent Application 61-132901, Jun. 20, 1986 (Iizuka)[1]

R. A. Buchroeder, Tilted-Component Telescopes. Part I: Theory, Applied Optics, Vol. 9, No. 9, pp. 2169-71, Sep. 1970 (Buchroeder)

Claims 1-4, 6, 7, 9, 14, and 15 stand rejected under 35 U.S.C. § 103 as being unpatentable over Schmidt '757, Godfrey, Traeger, and Buchroeder.

Claims 5-7 and 9 stand rejected under 35 U.S.C. § 103 as being unpatentable over Schmidt '757, Godfrey, Traeger, Buchroeder, and Owen.

Claims 10-12 and 16-26 stand rejected under 35 U.S.C. § 103 as being unpatentable over Schmidt '757, Godfrey, Traeger, Buchroeder, Schmidt '905, Iizuka, and Hatfield.[2]

We refer to the Final Rejection (Paper No. 4) and the Examiner's Answer (Paper No. 9) for a statement of the examiner's position and to the Brief (Paper No. 8) for appellants' position.

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[1] The USPTO translation branch has provided an English translation of the Japanese application, dated December 1997. A copy of the translation is attached to this decision.

[2] A previous rejection under 35 U.S.C. § 112 has been withdrawn, subsequent to entry of an amendment after the Final Rejection. (See Answer, page 2.)

OPINION

The rejections

The examiner's rejections of the claims are set forth principally on pages 3 through 6 of the Final Rejection. We refer to the examiner's findings with regard to the differences between the claims and the prior art, and further to the findings which point out what the references teach. We cannot agree, however, with the implication that a conclusion of obviousness necessarily follows from the recognition that claimed individual elements are "conventional" or "well known." A combination may be patentable whether composed of elements all new, partly new, or all old. Rosemount, Inc. v. Beckman Instruments, Inc., 727 F.2d 1540, 1546, 221 USPQ 1, 7 (Fed. Cir. 1984). Prior art references in combination do not make an invention obvious unless something in the prior art would suggest the advantage to be derived from combining their teachings. In re Sernaker, 702 F.2d 989, 995-96, 217 USPQ 1, 6-7 (Fed. Cir. 1983). Our reviewing court requires rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references. See, e.g., In re Dembiczak, 175 F.3d 994, 998-99, 50 USPQ2d 1614, 1616-17 (Fed. Cir. 1999).

The examiner bears the initial burden of presenting a prima facie case of unpatentability. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir.

1992). The lack of findings regarding motivation to combine the references skirts the proper inquiry with respect to the claimed "subject matter as a whole." However, we make the following determinations in view of the examiner's findings, appellants' arguments, and the evidence that is before us.

Claims 1-4, 6, 7, 9, 14, 15

Schmidt '757 discloses a combined daytime and nighttime viewing device having dual optical systems which share a common beam path. In arguments in defense of Claim 1, appellants contend:

> There is a mention of tilted components for telescopes in the Buchroeder article...but this article makes no mention of the use of these elements in an infrared optical system nor any suggestion for the incorporation of such a system in the compound optics having an opening passing through the tilted lens system for mounting the daylight optics between the nighttime optic [sic] nor the use of such a system in a rangefinder system.

(Brief, page 12.)

Although the argument is clearly not commensurate with the scope of Claim 1 (which requires that the night light corrector lens is "adjacent" the daylight objective lens, and makes no reference to a "rangefinder system"), we take the thrust of the argument to be that the combined teachings of Schmidt '757 and Buchroeder would not have suggested that the "night light corrector lens" 11 of Schmidt '757 should be modified such

that the corrector lens includes "a pair of tilted lens elements to compensate for astigmatism," as set forth in Claim 1.

Schmidt '757 discloses that light entering the viewing device first enters opening 10 and is reflected downward by mirror 9 (Figs. 1 and 4), through optical elements 11 and 22 which are deemed in the rejection to be the "night light corrector lens" and the "daylight objective lens," respectively. The Buchroeder article, in particular at the second and third full paragraphs of the second column on page 2169, teaches that tilting of elements off axis creates defects, including astigmatism, which may be compensated for by adding additional tilted elements, with greater numbers of additional tilted elements compensating for a greater number of defects. The principle is explicitly stated to be not limited to "tilted component telescopes," but relevant to "an ordinary optical system, such as a microscope." We find that the combined teachings would have suggested to the artisan the improvement that the mirror 9 of Schmidt '757, which reflects the light to the side or off-axis as the terms are used in Buchroeder, should be compensated by replacing night light corrector lens 11 with at least two ("a pair" of) lens elements which are tilted.[3] Night light corrector lens 11 is that element which is nearest the off-axis reflection from mirror 9. We note that Schmidt '757 discloses the nighttime viewing optics as being designed for infrared viewing. Appellants point to nothing in Buchroeder which suggests that the

[3] Whether there was also suggestion to replace the daylight objective lens is not now relevant, since such is not disclosed or claimed by appellants.

problems and solutions that are taught are limited in application to light in the visible portion of the spectrum. We thus consider appellants' arguments with respect to the "pair of tilted lens elements" to be unavailing.

Appellants' next argument with respect to Claim 1 is that Schmidt '757 is deficient in that the apparatus "moves the visible eyepiece assembly into and out of position whenever the image converter is moved into and out of position and does not use the eyepiece for both vision systems." (Id.) The assertion is contrary to the disclosure of Schmidt '757, in particular at column 2, lines 35 through 36 and column 2, line 59 through column 3, line 8, and as shown in Figure 1. Optics 20 for daylight viewing and image converter 15 are rotatable on revolving disc 16 about axis 17, for selecting between day and night viewing. In both cases, the image is viewed through eyepiece lens assembly 24, which is mounted on fixed tube 1.

Appellants also argue that Schmidt '757 "uses a totally different reticle system" (id.), an observation with which we agree. Schmidt '757 discloses a locating marker reticle 40 for a "secondary weapon" (Fig. 3), a line marker reticle 41 (Fig. 1) for the daylight viewing system, and a line marker reticle 42 (Figure 4) with lamp L and separate optical system 43 for the nighttime viewing system. See Schmidt '757, column 3, lines 59 through 70.

Appellants' Claim 1 requires that the "night reticle display" be "positioned between [the] image converter and [the] eyepiece lens assembly...." The examiner refers to Traeger

as suggesting the claimed positioning of the "night reticle display," and in particular to elements 35 and 36 (Figure 2) "in a similar optical system." (See Final Rejection, page 4.) However, Traeger, in particular at column 3, lines 1 through 9 and column 4, lines 13 through 16, appears to teach that "target mark" 35 is so positioned so as to be compatible with Traeger's disclosed objective turret 101, which switches between "strongly magnifying" and "weakly magnifying" objectives. Schmidt '757, on the other hand, has a kind of "turret" (comprised of revolving plate 16; Figure 1), but also discloses an operational night reticle that is not positioned as set forth in appellants' claims. Whether there was suggestion in the prior art to modify the apparatus of Schmidt '757 to add selective magnification, and perhaps as a consequence also a suggestion to provide a night reticle in a position different from that disclosed by Schmidt '757, would be mere speculation on our part. The rejection as stated does not contemplate those particular modifications.

Since it is unclear to us how the applied combination might suggest the subject matter of Claim 1, which includes the positioning of the "night reticle display" between the image converter and the eyepiece lens assembly, and the examiner has not explained why the references are believed to render the claimed subject matter obvious, we cannot sustain the rejection of Claim 1.

For the same reasons, we cannot sustain the rejection of Claim 2-4, 6, 7, 9, 14, and 15, since those claims contain at least the limitations of Claim 1.

Claims 5-7, 9

The rejection adds the teachings of Owen to the combination of references applied against base Claim 1. Since Owen does not remedy the deficiencies in the rejection with regard to Claim 1, we do not sustain the rejection of Claims 5-7 and 9.

Claims 10-12, 16-26

Appellants argue, in defense of Claim 16:

> The combination...includes a laser and a laser beamsplitter for receiving a laser beam from the laser thereon, and directing the beam through the day objective lens which is not taught by the Schmidt '757 patent nor any of the cited prior references in an integrated system of this type.

(Brief, page 15.)

The examiner refers, on page 5 of the Final Rejection, to Schmidt '905, Iizuka, and Hatfield for suggestions in the prior art with regard to the addition of a laser rangefinder system to a day and night sighting system.

Schmidt ‘905 discloses a “panoramic view apparatus” that may include an active ranging system, as detailed in Figures 1 and 2, and column 3, lines 53 through 65. As shown in Figure 1, laser emitter 36 emits radiation which is reflected by mirrors 37 and 38, and finally reflected toward the object to be measured by “lookout mirror” 8. The emitted radiation does not pass through the “daylight visual system,” which includes prism 12 and lens 13. See Schmidt ‘905, column 2, lines 47-54. The emitted beam is, instead, offset from the “day objective lens,” and passes through an unlabeled aperture shown in Figure 1.

Combining the Schmidt ‘905 teaching with the disclosure of Schmidt ‘757 would appear to result in, at best, emitting radiation for ranging through “night light corrector lens” 11 (Schmidt ‘757 Figure 1), rather than through “daylight objective lens” 22. The Iizuka reference teaches correction of chromatic aberration in a common objective lens for a laser beam and an infrared light (see, for example, page 3 of the English translation, “Purpose of the invention”). The teaching appears to be more relevant to the infrared viewing system of Schmidt ‘757, as opposed to the optical system which includes “daylight objective lens” 22. Hatfield discloses, with particular reference to column 2, line 37 through column 3, line 54, a visible/laser assembly 11 (Figure 1) including a laser 22 which emits radiation toward a target using beamsplitters 20 and 24. We do not find the disclosure of Hatfield to be of any particular relevance to the argued limitation of Claim 16.

Consequently, we conclude that the applied references fail to suggest the subject matter as a whole of Claim 16, which includes directing a beam from a laser through the day objective lens. Moreover, the examiner has not explained why the subject matter including that limitation is thought to be rendered obvious by the references. The mere fact that the prior art could be modified to result in the claimed invention would not have made the modification obvious unless the prior art suggested the desirability of the modification. See, e.g., In re Laskowski, 871 F.2d 115, 117, 10 USPQ2d 1397, 1398 (Fed. Cir. 1989).

We do not sustain the rejection of Claims 16 through 26, since Claims 17 through 26 contain at least the limitations of independent Claim 16. We also do not sustain the rejection of Claims 10-12, at least for the reason that the claims contain all the limitations of independent Claim 1, and the additional applied references do not remedy the deficiencies identified in our discussion, supra, of the rejection applied against that claim.

CONCLUSION

Since we have not sustained any of the Section 103 rejections, the rejection of Claims 1-7, 9-12, and 14-26 is reversed.

REVERSED

ERROL A. KRASS Administrative Patent Judge	)	
JERRY SMITH Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES

HOWARD B. BLANKENSHIP)
Administrative Patent Judge)

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