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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 21

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HIROKAZU NAKAYOSHI, YOSHIKI SHIROCHI,
SEIZI SATO, HIROYUKI SHIOTA,
HIROSHI MAMIYA and NAOKI KAMAYA

Appeal No. 95-4539
Application No. 08/205,394[1]

HEARD: May 5, 1999

Before BARRETT, DIXON, and BARRY, Administrative Patent Judges.

BARRY, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the patent examiner's final rejection of claims 2-4, 6-9, 11, 13-15, and 18-20. Claims 1, 5, 10, 12, 16, and 17 have been canceled.

[1] Application for patent filed March 3, 1994. According to appellants, the application is a continuation of Application 07/951,854, filed September 28, 1992, now abandoned.

We reverse

BACKGROUND

The appellants' invention is a stereoscopic viewer for viewing three-dimensional ("3-D") video signals. The invention comprises a casing 1, with a cutout 7 for a viewer's nose and left and right viewfinder lenses 2L and 2R for the viewer's left and right eyes. Liquid crystal displays ("LCDs") 6L and 6R are disposed opposite each other within the casing. The LCDs project images toward each other. Two mirrors 5L and 5R, placed at right angles to each other, receive the images from the left and right LCDs and reflect the images through the viewfinder lenses to the left and right eyes of the viewer.

Claim 18, which is representative of the invention, follows:

18. An imaging system comprising:

a casing;

a first viewfinder lens and a second viewfinder lens provided on said casing, each said viewfinder lenses having an optical axis extending into said casing;

a first display element providing a first image and a second display element proving [sic] a second image, said first and second display elements being mounted within said

casing at opposite ends thereof and projecting said first and second images toward each other;

first and second mirrors respectively arranged along the respective optical axes of said first and second viewfinder lenses and in front of said first and second display elements at an angle of 90° relative to each other whereby said first and second images from said first and second display elements respectively reflect off said first and second mirrors to said first and second viewfinder lenses;

a drive circuit for said first and second display elements for alternately supplying image data to said first and second display elements at every field of an input image signal such that, when one field is being supplied to one of said first and second display elements, the image data of the field previously supplied to the other of said first and second display elements is maintained by said other of said first and second display elements;

wherein said input image signal can comprise either a three dimensional video signal or a conventional video signal and wherein said images from said first and second display elements are supplied directly to said first and second mirrors, respectively; and

wherein said first and second display elements comprise liquid crystal display panels.

The prior art references of record relied upon by the examiner in rejecting the appealed claims follow

Butterfield	3,818,125	Jun. 18, 1974
Yang	4,542,960	Sep. 24, 1985
Schoolman	4,706,117	Nov. 10, 1987
Park (‘890)	4,954,890	Sep. 4, 1990
Park (‘555)	5,001,555	Mar. 19, 1991

Claims 2, 7-9, 13-15, 18, and 20 stand rejected under 35 U.S.C. § 103 as unpatentable over Schoolman in view of Park '890. Claims 3 and 4 stand rejected under § 103 as unpatentable over Schoolman in view of Park '890 further in view of Park '555. Claims 6 and 19 stand rejected under § 103 as unpatentable over Schoolman in view of Park '890 further in view of Yang. Claim 11 stands rejected under § 103 as unpatentable over Schoolman in view of Park '890 further in view of Butterfield. Rather than repeat the arguments of the appellants or examiner, we refer to the appeal brief[2] and examiner's answer[3] for the respective details thereof.

OPINION

In reaching our decision in this appeal, we have considered the subject matter on appeal, the rejections advanced by the examiner, and the evidence relied on by the

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[2] The appellants filed an original appeal brief on April 28, 1995. Responsive to a letter from the examiner, the appellants filed an amended appeal brief (Paper No. 17) on November 6, 1998. This decision cites to the amended appeal brief rather than to the original.

[3] The examiner's answer incorporates the rejections set forth in the final Office action of November 7, 1994 (Paper No. 7).

examiner to support the rejections. We have also considered the appellants' arguments contained in the appeal brief and the examiner's arguments in rebuttal contained in the examiner's answer.

After considering the record before us, it is our view that the collective evidence replied on and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the obviousness of the invention in claims 2-4, 6-9, 11, 13-15, and 18-20. Accordingly, we reverse.

Grouping of claims

The appellants state that for the appeal the claims should be considered as seven groups. The first group comprises claims 2, 7, 9, and 18. The second group comprises claim 8. The third group comprises claims 13 and 20. The fourth group comprises claims 14 and 15. The fifth group comprises claims 3 and 4. The sixth group comprises claims 16 and 19. The seventh and final group comprises claim 11. (Appeal Br. at 9-10.) The appellants have further provided reasons why the claims of the groups are believed to be

separately patentable in accordance with 37 C.F.R. § 1.192(c)(7) and M.P.E.P. § 1206.

Obviousness

In rejecting claims under 35 U.S.C. § 103, the patent examiner bears the initial burden of establishing a prima facie case of obviousness. A prima facie case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person
having ordinary skill in the art. If the examiner fails to establish a prima facie case, an obviousness rejection is improper and will be overturned. In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). With this as background, we analyze the prior art applied by the examiner in rejecting the claims on appeal.

Regarding claim 18, the sole independent claim, the examiner
observes that Schoolman discloses a stereoscopic imaging system. The examiner reads the claimed casing, optical, and

display limitations on elements of two embodiments of Schoolman. (Final Rejection at 2-3; Schoolman, Figs. 9-10.) Although the examiner recognizes that the configuration of the mirrors and orientation of the display elements in Schoolman differ from those of the claim, the examiner concludes that positioning the display elements to “project images toward each other is an obvious choice in engineering design ....” (Final Rejection at 4.)

The examiner also observes that Park ‘890 discloses a 3-D imaging system that alternately supplies new image data and maintains prior image data to first and second display elements to avoid flicker. The examiner concludes that it would have been obvious to supply alternately new image data and maintain prior image data to the first and second display elements of Schoolman to avoid flicker. (Id. at 3-4.)

The appellants counter that neither of the embodiments of Schoolman suggests a pair of display elements that project first and second images toward each other, wherein the images are reflected to a respective pair of viewfinder lenses by two

mirrors arranged at a right angle relative toward each another. In addition, the appellants note that the embodiment of Schoolman featuring LCDs does not employ mirrors. (Appeal Br. at 12-13.)

To establish obviousness, the prior art as a whole must have contained something to suggest the “desirability” of a modification or combination of prior art references. Lindemann Maschinenfabrik GMBH v. American Hoist and Derrick Co., 730 F.2d 1452, 1462, 221 USPQ 481, 488 (Fed. Cir. 1984). We agree with the appellants that Schoolman fails to suggest display elements that project first and second images toward each other, wherein the images are reflected to viewfinder lenses by two mirrors arranged at a right angle to each another. The embodiment depicted in Figure 9 of Schoolman arranges its display elements, viz., cathode ray tubes (CRTs) 56, in parallel. The CRTs project parallel images outward from a viewer’s perspective rather than toward each other. Similarly, the embodiment depicted in Figure 10 of Schoolman also arranges its display elements, viz., LCDs 66, in

parallel. The LCDs project parallel images inward rather than toward each other as in the claimed invention.

The examiner, furthermore, has failed to identify a suggestion anywhere else in the prior art to rearrange Schoolman's display elements to project images toward each other. The examiner's argument to arrange the display elements to project images toward each other as a matter of design choice, (Final Rejection at 4), is conclusory. Rather than providing a line of reasoning that explains why such a rearrangement would have been desirable, the examiner opines, "[t]he direction that the display elements are pointed makes no significant difference as long as the images are directed by mirrors to the viewer's eyes." (Id.) Clearly, this statement of the examiner's rejection does not amount to a prima facie case of obviousness. Because the examiner has not established a prima facie case, we cannot agree that the combination of Schoolman and Park '890 would have suggested the subject matter of claim 18 or its dependent claims 2, 7-9, 13-15, 18, and 20. Because neither Park '555, Yang, nor Butterfield cures the deficiencies in the combination of

Schoolman and Park ‘890, we also cannot sustain the rejection of dependent claims 3, 4, 6, 11, and 19.

CONCLUSION

To summarize, the decision of the examiner to reject claims 2-4, 6-9, 11, 13-15, and 19-20 under 35 U.S.C. § 103 is reversed.

REVERSED

LEE E. BARRETT Administrative Patent Judge	)	
JOSEPH L. DIXON Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
LANCE LEONARD BARRY Administrative Patent Judge	)	

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