

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 25

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte SOON-CHEOL CHOI

Appeal No. 2001-1208
Application 09/057,585

ON BRIEF

Before HAIRSTON, RUGGIERO, and DIXON, Administrative Patent Judges.

HAIRSTON, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1 through 26, 28 and 29. Claim 27 would be allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims (final rejection, page 4).

Appeal No. 2001-1208
Application No. 09/057,585

The disclosed invention relates to optics for a reflection-type projector.

Claim 1 is illustrative of the claimed invention, and it reads as follows:

1. A reflection type projector comprising:

a light source for emitting an input light;

only one image forming unit having a plurality of pixels in a two-dimensional array structure, each of the plurality of pixels being independently driven, for forming and reflecting an image from the input light;

a critical angle prism having a transmission/reflection surface disposed along an optical path of the input light, the transmission/reflection surface transmitting the input light from the light source to the image forming unit, and reflecting light that re-enters the critical angle prism from the image forming unit; and

a projection lens unit for enlarging and transmitting the light reflected from the transmission/reflection surface of the critical angle prism.

The references relied on by the examiner are:

van den Brandt (van den Brandt '730)	4,969,730	Nov. 13, 1990
van den Brandt et al. (van den Brandt '184)	5,098,184	Mar. 24, 1992
Burstyn	5,309,188	May 3, 1994
Poradish et. (Poradish)	5,612,753	Mar. 18, 1997
Levis et al. (Levis)	5,829,858	Nov. 3, 1998
		(filed Mar. 31, 1997)

Claim 1 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Burstyn.

Appeal No. 2001-1208
Application No. 09/057,585

Claim 7¹ stands rejected under 35 U.S.C. § 102(a) as being anticipated by Poradish.

Claims 8² through 10, 13 through 15, 18 through 20, 23, 28 and 29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Burstyn.

Claims 2, 11, 16, 17, 21 and 22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Burstyn in view of van den Brandt '730.

Claims 3, 4, 24 and 25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Burstyn in view of van den Brandt '184.

Claims 3 through 6 and 24 through 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Burstyn in view of Levis.

Reference is made to the final rejection (paper number 13), the answer (paper number 18) and the briefs (paper numbers 17 and 20) for the respective positions of the examiner and the appellant.

¹Appellant and the examiner both recognize that claim 7 depends from claim 1, and, therefore, includes all of the limitations of claim 1 (brief, page 7; answer, page 5).

²In view of appellant's grouping of the claims (brief, page 4), claim 12 will be considered with claim 8.

OPINION

We have carefully considered the entire record before us, and we will sustain the anticipation rejections of claims 1 and 7, and the obviousness rejections of claims 2 through 6 and 28. On the other hand, we will reverse the obviousness rejections of claims 8 through 26 and 29.

Appellant argues (brief, page 7; reply brief, page 3) that "all of the input light impinges upon **only one** image forming unit" in claim 1, whereas "Burstyn teaches separating the input light into three color components that respectively impinge upon separate coupling prism assemblies 10 (i.e., **three** coupling prism assemblies are required)." Appellant's argument concerning "all" of the input light is not commensurate in scope with claim 1. Nothing in claim 1 indicates that "all" of the input light impinges upon the "only one" image forming unit. More importantly, nothing in claim 1 precludes "separating" the input light into three color components. Notwithstanding the fact that Burstyn's optical assembly (Figure 1) for a reflector-type projector may handle only a single color (brief, page 6), the limitations of claim 1 still read on that portion of Burstyn's projector assembly. Thus, the 35 U.S.C. § 102(b) rejection of claim 1 is sustained.

Appeal No. 2001-1208
Application No. 09/057,585

The 35 U.S.C. § 103(a) rejection of claims 2 through 6 and 28 is sustained because appellant has chosen (brief, page 4) to let these claims stand or fall with claim 1.

Turning next to the anticipation rejection of claim 7, the examiner indicated (final rejection, page 1) that the limitations of claim 7 read on either one of the two modulator systems 5a or 5b. We agree with the appellant's argument (brief, page 8) that a single light modulator will project less lumens to the screen, but the examiner has correctly concluded that the limitations of claim 7, which includes those of claim 1, read entirely on either one of the two modulators 5a or 5b. Accordingly, the 35 U.S.C. § 102(a) rejection of claim 7 is sustained because "all" of the light from either the light source 10a or 10b will impinge upon "**only one** image forming unit" in modulator 5a or 5b (brief, page 9).

Turning lastly to the obviousness rejection of claim 8, the examiner has reached the conclusion (answer, page 6) that it would have been obvious to one of ordinary skill in the art to omit wedge prism 16 from the optical structure of Burstyn (Figure 1) since light will still travel in a straight line to right angle prism 14 as a result of the straight-line travel of light through the prism 16. Appellant argues (brief, pages 10

Appeal No. 2001-1208
Application No. 09/057,585

through 12) that the wedge prism 16 is needed in Burstyn to force the light to travel in a straight line through the two prisms, and that the examiner has not provided any evidence to support the theory that the wedge prism 16 is not needed in the structure disclosed by Burstyn. We agree with appellant's arguments. Burstyn clearly discloses (column 2, line 49 through column 3, line 4) that the geometry of the wedge prism 16 was chosen to pass the beam of light along "substantially a straight line" In the absence of evidence in the record that the structure disclosed by Burstyn will still function without wedge prism 16 to pass the same beam of light in a "substantially straight line," we will reverse the 35 U.S.C. § 103(a) rejection of claim 8.

The 35 U.S.C. § 103(a) rejection of claims 9 through 26 and 29 is likewise reversed because the teachings of van den Brandt '730, van den Brandt '184 and Levis fail to cure the noted shortcoming in the teachings of Burstyn.

DECISION

The decision of the examiner rejecting claims 1 and 7 under 35 U.S.C. § 102(b) and 35 U.S.C. § 102(a), respectively, is affirmed. The decision of the examiner rejecting claims 2 through 6, 8 through 26, 28 and 29 under 35 U.S.C. § 103(a) is

Appeal No. 2001-1208
Application No. 09/057,585

affirmed as to claims 2 through 6 and 28, and is reversed as to claims 8 through 26 and 29. Accordingly, the decision of the examiner is affirmed-in-part.

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

KENNETH W. HAIRSTON)	
Administrative Patent Judge)	
)	
)	
)	BOARD OF PATENT
JOSEPH F. RUGGIERO)	APPEALS AND
Administrative Patent Judge)	INTERFERENCES
)	
)	
JOSEPH L. DIXON)	
Administrative Patent Judge)	

KWH:svt

Appeal No. 2001-1208
Application No. 09/057,585

Sughrue, Mion, Zinn, MacPeak & Seas, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, D.C. 20037-3213