

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. 28

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KENZABURO SUZUKI

Appeal No. 1997-2849
Application No. 08/348,811

HEARD: November 29, 2000

Before FLEMING, RUGGIERO and BARRY, ***Administrative Patent Judges.***

FLEMING, ***Administrative Patent Judge.***

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1 through 8, the only claims pending in the application.

The invention relates to a zoom lens with a vibration reduction function. On page 18 of the specification, Appellant

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discloses that Figure 1 is a first embodiment of the present invention. In particular, Appellant discloses that the zoom lens includes a first group of lenses, G1; a second group of lenses, G2; a third group of lenses, G3 and a fourth group of lenses, G4. Appellant discloses on page 19 of the specification that vibration reduction mechanism 1 decenters the third group of lenses, G3.

Independent claim 1 is reproduced as follows:

1. A zoom lens comprising in the following order from the object side:

a first lens group having a negative refracting power;
a second lens group having a positive refracting power;
a third lens group having a negative refracting power;
a fourth lens group having a positive refracting power;
and

displacement means for attaining vibration reduction by moving said third lens group or a partial lens group in said third lens group in a direction substantially perpendicular to an optical axis,

wherein when zooming is effected from a wide-angle end to a telephoto end, an interval between said first and second lens groups decreases, an interval between said second and third lens groups increases, and an interval between said third and fourth lens groups decreases, and

said zoom lens satisfies the following condition:

$$0.2 < |f_3| / (f_W \cdot f_T^{1/2}) < 5$$

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where f_3 is the focal length of said third lens group, f_W is the focal length of the entire lens system at the wide-angle end, f_T is the focal length of the entire lens system at the telephoto end.

The Examiner relies on the following references:

Tokumaru et al. (Tokumaru)	4,591,235	May 27, 1986
Sato		Dec. 18, 1990
Kitagishi et al. (Kitagishi)	5,182,671	Jan. 26, 1993
Umeda	5,249,079	Sep. 28, 1993

Claims 1 through 8 stand rejected under 35 U.S.C. § 103 as being unpatentable over Tokumaru in view of Umeda. In the Examiner's answer, the Examiner entered a new ground of rejection. Under the new ground of rejection, claims 1 through 8 stand rejected under 35 U.S.C. § 103 as being unpatentable over Tokumaru in view of Umeda, Sato and Kitagishi.

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Rather than repeat the arguments of Appellant or the Examiner, we make reference to the briefs¹ and answers² for the respective details thereof.

OPINION

After a careful review of the evidence before us, we agree with the Examiner that claims 1 through 7 are properly rejected under 35 U.S.C. § 103. Thus, we will sustain the rejection of these claims but we will reverse the rejection of claim 8 on appeal for the reasons set forth *infra*.

At the outset, we note that Appellant states on page 5 of the brief that claims 1 through 7 stand or fall together. We

¹ Appellant filed an appeal brief on October 15, 1996. Appellant filed a reply brief on April 21, 1997. The Examiner mailed an office communication on April 30, 1997 stating that the reply brief has been entered and considered but no further response by the examiner is deemed necessary. The Examiner later filed a supplemental Examiner's answer in response to the supplemental reply brief.

Appellant filed a second reply brief on July 10, 2000. The Examiner mailed an office communication on August 11, 2000 stating that the second reply brief has been entered and considered but no further response by the Examiner is deemed necessary.

² The Examiner filed an Examiner's answer on February 20, 1997. The Examiner filed a supplemental Examiner's answer on May 8, 2000.

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note that Appellant argues claims 1 through 7 as a single group in the brief. 37 CFR § 1.192(c)(7) (July 1, 1996) **as amended at** 60 Fed. Reg. 14518 (March 17, 1995), which was controlling at the time of Appellant's filing the brief, states:

For each ground of rejection which appellant contests and which applies to a group of two or more claims, the Board shall select a single claim from the group and shall decide the appeal as to the ground of rejection on the basis of that claim alone unless a statement is included that the claims of the group do not stand or fall together and, in the argument under paragraph (c)(8) of this section, appellant explains why the claims of the group are believed to be separately patentable. Merely pointing out differences in what the claims cover is not an argument as to why the claims are separately patentable.

On pages 8 and 9 of the brief, Appellant argues that a person ordinarily skilled in the art of designing zoom lenses would have found no suggestion in Umeda of moving the third lens group in the zoom lenses of Tokumaru for image stabilization. Appellant agrees that Tokumaru discloses a -+--+ zoom lens system. However, Appellant argues that Tokumaru is not concerned with image stabilization by moving the third lens group in the direction substantially perpendicular to the optical axis for the purpose of image stabilization.

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Appellant further agrees that Umeda teaches a four zoom lens system in which Umeda is concerned with image stabilization, by moving the third lens group in a direction substantially perpendicular to the optical axis for the purpose of image stabilization. However, Appellant argues that Umeda teaches a +--+ zoom lens and that it is this difference that would not suggest moving the third lens in a -+-+ zoom lens of Tokumaru for image stabilization.

The Federal Circuit states that "[t]he mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." ***In re Fritch***, 972 F.2d 1260, 1266 n.14, 23 USPQ2d 1780, 1783-84 n.14 (Fed. Cir. 1992), ***citing In re Gordon***, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). It is further established that "[s]uch a suggestion may come from the nature of the problem to be solved, leading inventors to look to references relating to possible solutions to that problem." ***Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc.***, 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996), ***citing In re Rinehart***, 531 F.2d 1048, 1054, 189 USPQ 143, 149 (CCPA

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1976) (considering the problem to be solved in a determination of obviousness). The Federal Circuit reasons in ***Para-Ordnance Mfg. Inc. v. SGS Importers Int'l Inc.***, 73 F.3d 1085, 1088-89, 37 USPQ2d 1237, 1239-40 (Fed. Cir. 1995), ***cert. denied***, 519 U.S. 822 (1996), that for the determination of obviousness, the court must answer whether one of ordinary skill in the art who sets out to solve the problem and who had before him in his workshop the prior art, would have been reasonably expected to use the solution that is claimed by the Appellant. However, "[o]bviousness may not be established using hindsight or in view of the teachings or suggestions of the inventor." ***Para-Ordnance Mfg.***, 73 F.3d at 1087, 37 USPQ2d at 1239, ***citing W. L. Gore***, 721 F.2d at 1551, 1553, 220 USPQ at 311, 312-313.

Upon our review of Tokumaru, we find that Tokumaru discloses all the claim limitations recited in Appellant's claim 1 except for a "displacement means for attaining vibration reduction by moving said third lens group . . . in a direction substantially perpendicular to an optical axis." We further find that Umeda teaches a zoom lens comprising a first lens group, a second lens group, a third lens group and a

fourth lens group in a displacement means for attaining vibration reduction by moving the third lens group in a direction substantially perpendicular to the optical axis. We find in column 1, lines 45 through 63, that Umeda recognizes the problem of employing displacement means in a zoom lens system. In particular, Umeda discloses that if a displacement means is employed to stabilize the blurring image in a zoom lens system, it is desirable to correct aberrations caused in the deflecting lens group by the deflecting lens group itself. Umeda discloses in column 3, lines 48 through 60, that it is desirable to dispose the deflecting lens group in the third lens unit L_3 . Umeda states that a deterioration of aberration due to stabilizing the blurred image is required to be small. It is therefore desirable to dispose the deflecting lens group at a position where the height of incidence and the angle of incidence do not change significantly during the zooming operation. Furthermore, if the lens disposed at a place where the principal ray of the off-axial light intersects with the optical axis of the zoom lens system, it is utilized as the deflecting lens group, a deterioration of aberration due to the decentering of the deflecting lens group becomes small.

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From these teachings, one of ordinary skill in the art would recognize that what is critical is the geometry of the lens group and not the positive or negative refracting powers of the lens group. We further note that Tokumaru's zoom lens system also has similar four lens grouping having the same geometry. Therefore, given the teachings of Umeda, one of ordinary skill in the art would have been led to applying Umeda's displacement means to the third lens group to thereby cause the third lens group to be decentered in a direction substantially perpendicular to the optical axis. We further note that Sato and Kitagishi provide further support to buttress this position. Therefore, we will sustain the Examiner's rejection of claims 1 through 7.

Regarding claim 8, Appellant argues on page 10 of the brief that claim 8 recites that the claimed zoom lens also includes a stationary flare stop which is arranged around the optical axis and shields unnecessary rays upon movement of said third lens group in the direction substantially perpendicular to the optical axis for vibration reduction. Appellant argues that the Examiner's contention that Tokumaru

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discloses this limitation is in error. We agree and, therefore, will not sustain the rejection of claim 8.

In view of the foregoing, the decision of the Examiner rejecting claims 1 through 7 under 35 U.S.C. § 103 is affirmed; however, the decision of the Examiner rejecting claim 8 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

MICHAEL R. FLEMING)	
Administrative Patent Judge)	
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LANCE LEONARD BARRY)	BOARD OF PATENT
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