

Trial decision

Correction No. 2015-390034

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The case of trial for correction of Japanese Patent No. 5711839 has resulted in the following conclusion:

Conclusion

The correction of Description and Claims of Japanese Patent No. 5711839 is approved as described in the corrected Description and Claims in accordance with each group of claims (i.e. all the claims) which are attached to the written request for trial.

Reasons

No. 1 History of the procedures

The Japanese Patent No. 5711839 (hereinafter, referred to as "the Patent") was filed on May 9, 2014 and registered to establish a patent right on March 13, 2015, which is related to a new application based on the Japanese Patent Application No. 2010-167789 (hereinafter, referred to as "the original application") filed July 27, 2010. The trial for correction was requested on April 7, 2015.

No. 2 Summary of request for trial

1. Purpose of request for trial

The purpose of request for trial is to demand a decision that the correction of Description and Claims of Japanese Patent No. 5711839 should be approved as described in the corrected Description and Claims in accordance with each group of claims (i.e. all the claims) which are attached to the request for trial.

2. Matters of correction

As for claim1, the description "the first lens group comprises, in order from a side closest to an object: a lens having a positive refractive index; a lens having a positive refractive index; and a lens having a negative refractive index" should change into "the first lens group comprises, in order from a side closest to an object: a lens having a positive refractive power; a lens having a positive refractive power; and a lens having a negative refractive power" according to a change of the phrase "refractive index" into "refractive power". (Hereinafter, that is referred to as "the matters of correction of the case".)

No. 3 Judgment by the body

1 The corrected claim 1 according to the matters of correction is as follows.

"An image forming optical system, comprising, in order from an object side to an imaging plane side:

a first lens group having a positive refractive power;

a second lens group having a positive or negative refractive power; and

a third lens group having a positive refractive power,

wherein the first lens group comprises, in order from a side closest to an object: a lens having a positive refractive power; a lens having a positive refractive power; and a lens having a negative refractive power,

the system further comprises an aperture stop disposed between an object-side surface of the first lens group and an object-side surface of the second lens group,

the lens closest to the object in the first lens group, and the lens closest to an image in the third lens group are always fixed,

the second lens group consists of one negative lens component,

the negative lens component is a single lens,

only the second lens group moves along an optical axis toward the image during focusing from a long range to a short range, and

the third lens group consists of a front sub-lens group that has a positive refractive power and is disposed on the object side sandwiching a largest axial air interval in the third lens group, and a rear sub-lens group that has a negative refractive power and is disposed on the image side." (The underlined parts are corrected.)

2 Object of the correction

(1) Common general technical knowledge in the field of optical lenses

A. In the technical field of optical lenses, "what functions to make incident parallel luminous flux converge is called a convex lens" and "what functions to make it diverge is called a concave lens". According to its shapes, they also may be called a double-convex lens, plano-convex lens, convex-concave lens (meniscus lens), etc. According to relative difference in curvature between a surface and the other, a lens with the middle which is thicker than the periphery works as a convex one, and a lens with an inverted relationship works as a concave one. Further, a convex lens may be called a positive lens, and a concave lens may be called a negative lens. Those things fall into common general technical knowledge.

B. As for a convex lens, an incident light ray from infinity passes through the lens and focuses on a focal point in the image side. The distance from the center of the lens to the focal point is defined as a focal length, whose value is positive. As for a concave lens, an incident light ray from infinity passes through the lens and diverges in the image side. If the diverging light ray were extended toward the object side it would focus on a focal point. The length from the center of the lens to the focal point in the object side is defined as a focal length, whose value is negative. The reciprocal of the focal length is defined as "refractive power" of the lens. Consequently, the positive "refractive power" means the reciprocal of the focal length in the image side for a convex lens, and the negative "refractive power" means the reciprocal of the focal length in the object side for a concave lens. Those things fall

into common general technical knowledge of the optical technology.

C. Further, the "refractive index" is a ratio between the velocity of light in vacuum c and that in a medium (phase velocity) v " (see the item "refractive index", p. 59, "Rikagaku Jiten" fifth edition, Iwanami Shoten, published on December 25, 1998). Since the velocity of light in the technical field of optical lenses shall not be negative, it is apparent that the "refractive index" doesn't become negative.

(2) Description pertaining to the configuration of the first lens group in the Description of the Patent

"[0052]

Furthermore, it is preferred that the first lens group have the following configuration.

[0053]

Preferably, the first lens group includes two positive lenses disposed on the object side of the aperture stop, and at least one negative lens.

[0054]

The positive refractive power is shared between the multiple positive lenses, and the negative lens is adopted. This configuration is advantageous to correct the spherical aberration, coma, and chromatic aberration.

[0055]

Preferably, the first lens group consists of, in order from the object side to the image side: a lens component having a positive refractive power; a cemented lens component that has a positive lens and a negative lens, and a convex surface oriented toward the object side. Note that the lens component is a lens body where only two surfaces that are the object-side surface and the image-side surface are in contact with air, and means a single lens or a cemented lens.

[0056]

The positive refractive power is shared between the object-side lens component and the object-side surface of the image-side lens component, and a negative lens is adopted as the image-side lens component. This configuration is advantageous to correct the spherical aberration, coma, and chromatic aberration."

(3) The description relating to the first lens group in the Description of the Patent includes "includes two positive lenses and at least one negative lens ([0053]),

the positive refractive power is shared between the object-side lens component and the object-side surface of the image-side lens component, and the negative lens is adopted as the image-side lens component ([0056])".

It is apparent that the two positive lenses and the negative lens are arranged from the object side, that is, according to the aforementioned common general technical knowledge about optical lenses, from the object side, two convex lenses (it is apparent that each lens has a positive refractive power) and one negative lens (it is apparent that this lens has a negative refractive power) are arranged.

(4) In the description of the Patent as cited in the above (1), there is no explanation by means of phrases "positive refractive index" or "negative refractive index", or rather "refractive index".

Further, in the light of the entire Description of the Patent, the technical term

"refractive index" is only used in explanation of numerical data described in an example with numerical data in [0141]-[0151] such that "nd and vd are the refractive index and Abbe number for the d-line ($\lambda = 587.6$ nm), respectively". Besides only positive values are used for specific numerical data while no negative value is used. It is apparent that there is no definition for parameters employed as "positive refractive index" or "negative refractive index".

(5) Therefore, taking into consideration the above (1) to (4), it is apparent that the description of "positive refractive index" and "negative refractive index" in claim 1 before correction are erroneously described instead of "positive refractive power" and "negative refractive power", respectively.

(6) Conclusion

The matters of correction of the case serve the purpose of correction of errors and thus the purpose applies to the matter listed in item (ii) of the proviso to Article 126(1) of Patent Act.

3 Whether or not the matters of correction is within what is described in Description, Claims or the Drawings originally attached to the application (hereinafter, referred to as "original Description etc.")

(1) The original Description etc. includes the following description.

A. "[Claim 12] The image forming optical system according to any one of claims 1 to 11, wherein the first lens group includes two positive lenses disposed on the object side of the aperture stop, and at least one negative lens.

[Claim 13] The image forming optical system according to any one of claims 1 to 12, wherein the first lens group consists of, in order from the object side to the image side: a lens component having a positive refractive power; a cemented lens component that has a positive lens and a negative lens, with a convex surface oriented toward the object side."

B. "[0087] FIG. 2 is a sectional view of an optical system of Example 2. FIG. 2(a) is a sectional view of the optical system of Example 2 focused at infinity. FIG. 2(b) is a sectional view of the optical system of Example 2 focused at close range.

[0088] As shown in FIG. 2, the optical system of Example 2 consists of, from the object side to the image side: a first lens group G1 having a positive refractive power; a second lens group G2 having a positive refractive power; and a third lens group G3 having a positive refractive power. The system further includes an aperture stop S disposed in the first lens group G1.

[0089] The first lens group G1 consists of, from the object side: a double-convex positive lens L11; a positive meniscus lens L12 having a convex surface oriented toward the object side; a negative meniscus lens L13 having a convex surface oriented toward the object side; a double-concave negative lens L14; an aperture stop S; and a positive meniscus lens L15 having a convex surface oriented toward the image side."

C. The "double-convex positive lens" is a double-convex lens with a positive refractive power, the "positive meniscus lens" is a meniscus lens with a positive refractive power, and the "negative meniscus lens" is a meniscus lens with a negative

refractive power. These things fall under the common general technical knowledge.

(2) According to the above A to C, the description "the first lens group comprises, in order from a side closest to an object: a lens having a positive refractive power; a lens having a positive refractive power; and a lens having a negative refractive power" is within what were described in the original Description etc.

(3) Therefore, the matters of correction of the case comply with the provision of Patent Act Article 126(5).

4. Substantial expansion and change of the scope of the claims

(1) As discussed in the above 2, the change from "refractive index" into "refractive power" should be regarded as correction of errors. The correction does not substantially expand or change the scope of the claims.

(2) Therefore, the matters of the correction of the case comply with the provision of Patent Act Article 126(6).

5 Independent patentability of the corrected invention

(1) Japanese Unexamined Patent Application Publication No. 2012-27349, which is an unexamined publication of the original application.

The Patent is related to the new application based on the Japanese Patent Application No. 2010-167789 (Japanese Unexamined Publication No. 2012-27349) while it is apparent that there are no new matters added in the new application. Consequently, the application is a legitimate division of an application prescribed in Patent Act Article 44(1).

Therefore, the aforementioned Japanese Unexamined Patent Application Publication No. 2012-27349 shall not be regarded as a distributed publication prior to the filing of the patent application of this case.

(2) Comparison between Japanese Unexamined Patent Application Publication No. 2004-341512 laid open before the application for the Patent, which is deemed to have been filed on the filing date of the original patent application of the Patent based on the deemed provision of Patent Act Article 44 (2) (hereinafter, referred to as "Cited Document 1") and Japanese Unexamined Patent Application Publication No. H11-258504 (hereinafter, referred to as "Cited Document 2") and Decision

The matter defining the invention according to claim 1 after the correction of the Patent, that is,

"comprising, in order from an object side to an imaging plane side:

a first lens group having a positive refractive power;

a second lens group having a positive or negative refractive power; and

a third lens group having a positive refractive power,

wherein the first lens group comprises, in order from a side closest to an object: a lens having a positive refractive power; a lens having a positive refractive power; and a lens having a negative refractive power"

is not disclosed in Cited Documents 1 or 2, and cannot be easily invented on the basis of the inventions described in Cited Documents 1 or 2.

Therefore, after the correction of the Patent the invention according to claim 1 and the inventions according to claims 2 to 18 which are dependent on claim 1 could not be easily invented by a person skilled in the art on the basis of the inventions disclosed in Cited Documents 1 or 2. Thus, they don't fall under Patent Act Article 29(2) and are what can be patented independently as of the moment when the application was filed.

(3) As for the inventions according to claims 1 to 18, there is no other reason found to deny independent requirements for their patentability as of the moment when the application was filed.

(4) Therefore, the matters of correction of the case comply with the provision of Patent Act Article 126(7).

No. 4 Conclusion

The request for trial of the case whose purpose is listed in item (ii) of the proviso to Article 126(1) of Patent Act complies with the provisions of Article 126(5)-(7).

Therefore, the trial decision shall be made as described in the conclusion.

May 1, 2015

Chief administrative judge: FUJIWARA, Keishi

Administrative judge: OTAKI, Mari

Administrative judge: SHIMIZU, Yasushi