Appeal decision

Appeal No. 2018-13917

Appellant 3M Innovative Properties Company

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The case of appeal against the examiner's decision of refusal of Japanese Patent Application No. 2017-95460, entitled "GLARE-REDUCING GLAZING ARTICLES" (the application published on September 14, 2017, Japanese Unexamined Patent Application Publication No. 2017-161928) has resulted in the following appeal decision.

Conclusion

The appeal of the case was groundless.

Reason

No. 1 Outline of the case

1 History of the procedures, or the like

Japanese Patent Application No. 2017-95460 (hereinafter referred to as "the Application") is a divisional application from Japanese Patent Application No. 2013-543242 filed on December 6, 2011 as an international filing date (priority claim under the Paris Convention received by the foreign receiving office on December 10, 2010, USA). The history of the procedures, or the like, is as follows.

dated May 12, 2017: Written amendment
dated February 7, 2018: Notification of reasons for refusal
dated May 17, 2018: Written opinion
dated May 17, 2018: Written amendment
dated June 11, 2018: Examiner's decision of refusal (hereinafter referred to as "Examiner's Decision")
dated October 19, 2018: Written appeal

2 The Invention

The inventions according to Claims 1 to 5 of the Application are as specified by the matters described in Claims 1 to 5 of the Scope of Claims amended on May 17, 2018. The invention according to Claim 1 is as follows (hereinafter referred to as "the Invention").

"A film including a reflective polarizing film article,

the reflective polarizing film article comprising a reflective polarizing film, and a reflection inhibitor layer arranged on only one side of the reflective polarizing film, wherein

the reflection inhibitor layer comprises a tinted layer or an absorptive polarizer layer, the reflection inhibitor layer blocks light reflected from the reflective polarizing film, the reflective polarizing film article reduces glare, which is horizontally polarized light including light reflected from a horizontal surface and Rayleigh scattered light, when attached on only one side of a glazing substrate of a window so that a polarization block axis of the reflective polarizing film is horizontal and the reflection inhibitor layer is located on the reflective polarizing film to face the inside of the room, the reflective polarizing film article reduces horizontally polarized light to 90% or less of horizontally polarized incident visible light, and the film is attached to only one side of a glazing substrate of a window so that a polarization block axis of the reflective polarizing film is horizontal and the reflection inhibitor layer is located on the reflective polarizing film to face only the inside of the room."

3 Regarding the Examiner's Decision

The reasons for refusal stated in the Examiner's Decision are as follows: (Novelty) Since the inventions according to Claims 1 to 5 of the Application are inventions described in National Publication of International Patent Application No. 2002-502503 (hereinafter referred to as "Cited Document 1") which is a publication distributed in Japan or a foreign country before the priority date of the inventions (hereinafter referred to as "Priority date"), the appellant should not be granted a patent for the inventions under the provisions of Article 29(1)(iii) of the Patent Act; (Inventive step) Since the inventions according to Claims 1 to 5 of the Application could have been easily made by a person ordinarily skilled in the art of the invention (hereinafter referred to as "a person skilled in the art") before the Priority date on the basis of the invention described in the Cited Document 1 which is a publication distributed in Japan or a foreign country before the filing of the application, the appellant should not be granted a patent for the inventions under the provisions of Article 29(2) of the Patent Act.

No. 2 Judgment by the body

1 Description in Cited Document and Cited Invention

(1) Description in Cited Document 1

Cited Document 1 cited in the reasons for refusal stated in the Examiner's Decision, which is a publication distributed in Japan or a foreign country before the Priority date, includes the following descriptions. The underlines were added by the body and indicate portions utilized for finding or judgment for the Cited Invention. Line breaks that are considered to be unnecessary are omitted.

A p. 13 l. 3-l. 6 (Lines are counted without blank lines. The same applies hereinafter.)

"Background of the Invention

This invention relates to optical materials which contain structures suitable for controlling optical characteristics, such as reflectance and transmission. In a further aspect, it relates to control of specific polarizations of reflected or transmitted light."

B p. 18 l. 1-l. 14

"Summary of the Invention

In one aspect, the present invention relates to a diffusely reflective film or other optical body comprising a birefringent continuous polymeric phase and a substantially nonbirefringent disperse phase disposed within the continuous phase. The indices of refraction of the continuous and disperse phases are substantially mismatched (i.e., differ from one another by more than about 0.05) along a first of three mutually orthogonal axes, and are substantially matched along a second of the three mutually orthogonal axes. In some embodiments, the indices of refraction of the continuous and disperse phases can be substantially matched or mismatched along, or parallel to, a third of three mutually orthogonal axes to produce a mirror or a polarizer. Incident light polarized along, or parallel to, a mismatched axis is scattered, resulting in significant diffuse reflection. Incident light polarized along a matched axis is scattered to a much lesser degree and is significantly spectrally transmitted. These properties can be used to make optical films for a variety of uses, including low loss (significantly nonabsorbing) reflective polarizers for which polarizations of light that are not significantly transmitted are diffusely reflected."

C p. 19 l. 5-l. 10

"In yet another aspect, the present invention relates to an optical body acting as a

reflective polarizer with a high extinction ratio. In this aspect, the chosen index difference in the match direction is as small as possible and the difference in the mismatch direction is maximized. The volume fraction, thickness, and disperse phase particle size and shape can be chosen to maximize the extinction ratio, although the relative importance of optical transmission and reflection for the different polarizations may vary for different applications."

D p. 22 l. 21-l. 25

"FIGS. 1-2 illustrate a first embodiment of the present invention. In accordance with the invention, there is produced a diffusely reflective optical film 10 or other optical body which consists of a birefringent matrix or continuous phase 12 and a discontinuous or disperse phase 14. The birefringence of the continuous phase is typically at least about 0.05, preferably at least about 0.01, more preferably at least about 0.15, and most preferably at least about 0.2." (Note by the body: FIG. 1 and FIG. 2 are as follows.)

FIG. 1:

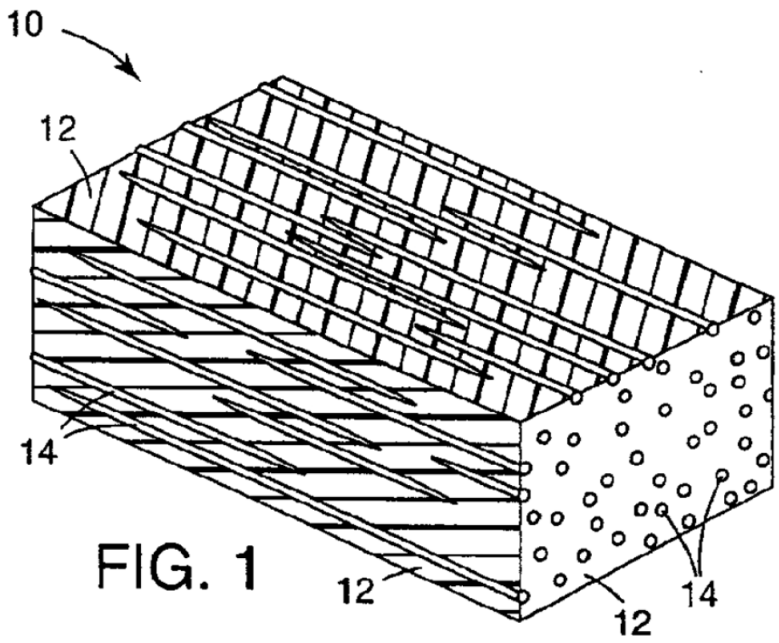

FIG. 1

FIG. 2:

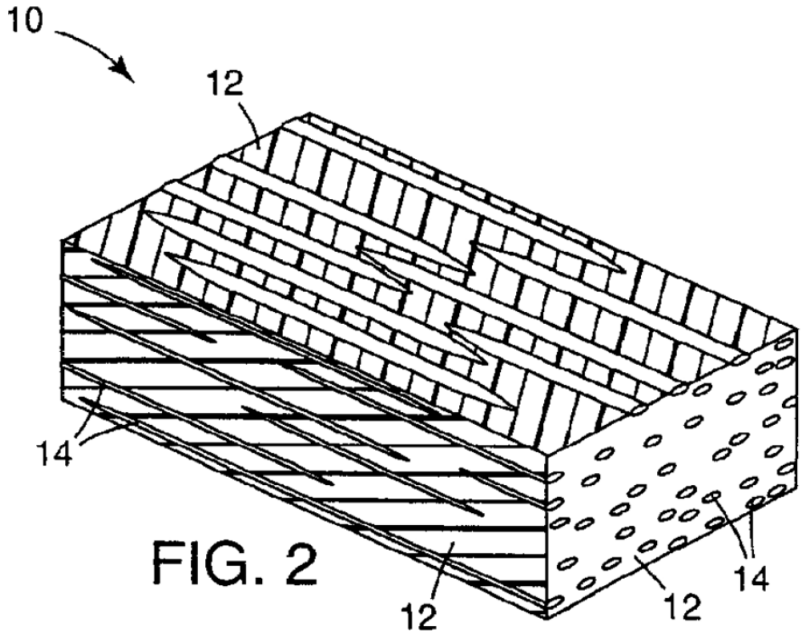

FIG. 2

E p. 23 l. 7-l. 11

"The mismatch in refractive indices along a particular axis has the effect that incident light polarized along that axis will be substantially scattered, resulting in a significant amount of reflection. By contrast, incident light polarized along an axis in which the refractive indices are matched will be spectrally transmitted or reflected with a much lesser degree of scattering. This effect can be utilized to make a variety of optical devices, including reflective polarizers and mirrors."

F p. 46 l. 16-l. 21

"Multilayer Combinations

If desired, one or more sheets of a continuous/disperse phase film made in accordance with the present invention may be used in combination with, or as a component in, a multilayered film (i.e., to increase reflectivity). Suitable multilayered films include those of the type described in WO 95/17303 (Ouderkirk et al.).

G p. 47 l. 5-l. 7

"FIG. 5 illustrates one example of this embodiment of the present invention. There, the optical body consists of a multilayer film 20 in which the layers alternate between layers of PEN 22 and layers of co-PEN 24."

(Note by the body: FIG. 5 is as follows.)

FIG. 5:

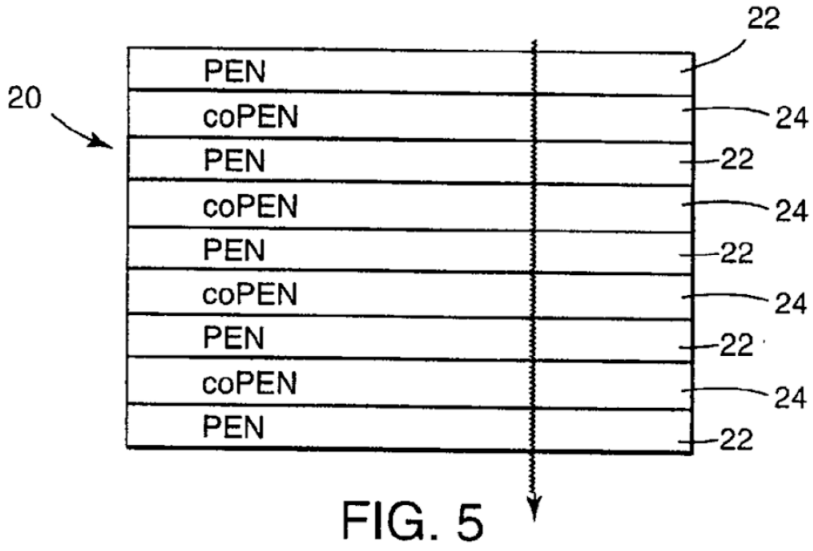

FIG. 5

H p. 51 l. 13-p. 52 l. 9

"Dyes, Pigments, Inks, and Imaging Layers

The films and optical devices of the present invention may be treated with inks, dyes, or pigments to alter their appearance or to customize them for specific applications. Thus, for example, the films may be treated with inks or other printed indicia such as those used to display product identification, advertisements, warnings, decoration, or other information. Various techniques can be used to print on the film, such as screenprinting, letterpress, offset, flexographic printing, stipple printing, laser printing, and so forth, and various types of ink can be used, including one and two component inks, oxidatively drying and UV-drying inks, dissolved inks, dispersed inks, and 100% ink systems.

The appearance of the optical film may also be altered by coloring the film, such as by laminating a dyed film to the optical film, applying a pigmented coating to the surface of the optical film, or including a pigment in one or more of the materials (e.g., the continuous or disperse phase) used to make the optical film.

Both visible and near IR dyes and pigments are contemplated in the present invention, and include, for example, optical brighteners such as dyes that absorb in the UV and fluorescent portions of the visible region of the color spectrum. Other additional layers that may be added to alter the appearance of the optical film include, for example, opacifying (black) layers, diffusing layers, holographic images or holographic diffusers, and metal layers. Each of these may be applied directly to one or both surfaces of the optical film, or may be a component of a second film or foil

construction that is laminated to the optical film. Alternately, some components such as opacifying or diffusing agents, or colored pigments, may be included in an adhesive layer which is used to laminate the optical film to another surface."

I p. 52 l. 17-l. 21

"Dichroic dyes are a particularly useful additive for many of the applications to which the films and optical devices of the present invention are directed, due to their ability to absorb light of a particular polarization when they are molecularly aligned within the material. When used in a film or other material which predominantly scatters light of only one polarization, the dichroic dye causes the material to absorb light of one polarization more than light of another."

J p. 55 l. 1-l. 5

"Adhesives

Adhesives may be used to laminate the optical films and devices of the present invention to another film, surface, or substrate. Such adhesives include both optically clear and diffuse adhesives, as well as pressure sensitive and nonpressure sensitive adhesives."

K p. 56 l. 23-p. 57 l. 21

"Fenestrations

The optical films and devices of the present invention are suitable for use in fenestrations, such as skylights or privacy windows, where diffuse transmission of light is desirable and transparency or clarity of the fenestration is either unnecessary or undesirable. In such applications, the optical films of the present invention may be used in conjunction with, or as components in, conventional glazing materials such as plastic or glass. Glazing materials prepared in this manner can be made to be polarization specific, so that the fenestration is essentially transparent to light of a first polarization but substantially reflects light of a second polarization, thereby eliminating or reducing glare. The physical properties of the optical films can also be modified as taught herein so that the glazing materials will reflect light of one or both polarizations within a certain region of the spectrum (e.g., the UV region), while transmitting light of one or both polarizations in another region (e.g., the visible region).

The optical films of the present invention may also be used to provide decorative fenestrations which transmit light of specific wavelengths. Such fenestrations may be used, for example, to impart a specific color or colors to a room (e.g., blue or gold), or

may be used to accent the decor thereof, as through the use of wavelength specific lighting panels.

The optical films of the present invention may be incorporated into glazing materials in various manners as are known to the art, such as through coating or extrusion. Thus, in one embodiment, the optical films are adhered to all, or a portion, of the outside surface of a glazing material, either by lamination or with the use of an optical adhesive. In another embodiment, the optical films of the present invention are sandwiched between two panes of glass or plastic, and the resulting composite is incorporated into a fenestration. Of course, the optical film may be given any additional layers or coatings (e.g., UV absorbing layers, antifogging layers, or antireflective layers) as are described herein to render it more suitable for the specific application to which it is directed."

(2) Cited Invention

An optical film, which is "the present invention" in Cited Document 1, is described in p. 18 l. 1-l. 14 of Cited Document 1((1) B), an application thereof is described in p. 56 l. 23-p. 57 l. 21 ((1) K), and a method of coloring an optical film is described in p. 51 l. 13-p. 52 l. 9 ((1) H).

Thus, Cited Document 1 describes the following invention (hereinafter referred to as "Cited Invention"). For avoiding confusion between an optical film per se and an optical film with a dyed film laminated thereon, the latter one is referred to as "optical film with dyed film".

"An optical film with dyed film, wherein

the optical film comprises a birefringent continuous polymeric phase, and a substantially nonbirefringent disperse phase dispersed within the continuous phase, the indices of refraction of the continuous and disperse phases are substantially mismatched along a first axis and are substantially matched along a second axis, incident light polarized parallel to a mismatched axis is scattered, resulting in significant diffuse reflection, incident light polarized along a matched axis is scattered to a much lesser degree,

the optical film is suitable for use in fenestrations where diffuse transmission of light is desirable and transparency or clarity of the fenestration is either unnecessary or undesirable,

the fenestration is essentially transparent to a first polarization of light but substantially reflects a second polarization of light, thereby eliminating or reducing glare, and may be used to impart a specific color or colors to a room (e.g., blue or gold),

and

the appearance of the optical film may also be altered by coloring the film, such as by laminating a dyed film to the optical film."

2 Comparison and judgment

Results of comparing the Invention with the Cited Invention are as follows.

(1) Comparison

A Reflective polarizing film

The "optical film" in the Cited Invention is configured so that "incident light polarized parallel to a mismatched axis is scattered, resulting in significant diffuse reflection, and incident light polarized along a matched axis is scattered to a much lesser degree".

According to the above optical function, it can be said that the "optical film" in the Cited Invention is a film which shows polarization characteristics. It can be also said that the "optical film" in the Cited Invention, which "diffusely reflects" "incident light polarized parallel to a mismatched axis", is a reflective film.

Therefore, the "optical film" in the Cited Invention corresponds to the "reflective polarizing film" in the Invention.

B Reflection inhibitor layer, tinted layer

The "optical film" in the Cited Invention is configured so that "the appearance of the optical film may also be altered by coloring the film, such as by laminating a dyed film to the optical film" and the optical film "may be used to impart a specific color or colors to a room (e.g., blue or gold)".

In light of the above configuration and the facts that the term "dyed" corresponds to "tinted" and that sufficient effect (imparting a specific color to a room) can be produced by one "dyed film", the "optical film" in the Cited Invention is a "tinted layer" arranged on only one side of the "optical film". It can be said that the "dyed film" in the Cited Invention has a "tinted layer" functionally. In addition, according to the description in [0041] of the specification of the Application, the "dyed film" in the Cited Invention corresponds to the "reflection inhibitor layer" in the Invention and has a function of "blocking light reflected from the reflective polarizing film".

Thus, the "dyed film" in the Cited Invention corresponds to the "reflection inhibitor layer" which satisfies the following requirements, "comprising a tinted layer or an absorptive polarizer layer, the reflection inhibitor layer blocks light reflected from the reflective polarizing film" in the Invention. The "dyed film" in the Cited Invention

satisfies the requirements, "arranged on only one side of the reflective polarizing film", in the "reflection inhibitor layer" in the Invention.
(Note by the body: Regarding the arrangement of the "dyed film", even if the above underlined "only" is a different feature, a person skilled in the art who does not desire high cost may employ the configuration naturally.)

C Reflective polarizing film article

As described in A and B, the "optical film with dyed film" in the Cited Invention corresponds to the "reflective polarizing film article" in the Invention. The "optical film with dyed film" in the Cited Invention includes the configuration, "comprising a reflective polarizing film and a reflection inhibitor layer arranged on only one side of the reflective polarizing film", in the "reflective polarizing film article".

D Film

The "optical film with dyed film" in the Cited Invention is, as indicated by the words, a film and includes a function as "an optical film with dyed film".

Thus, the "optical film with dyed film" in the Cited Invention corresponds to the "film" in the Invention and includes the configuration, "including a reflective polarizing film article", in the Invention.

(2) Corresponding feature and different feature

A Corresponding Feature

The Invention and the Cited Invention are identical in the following configuration.
"A film including a reflective polarizing film article,

the reflective polarizing film article comprising a reflective polarizing film, and a reflection inhibitor layer arranged on only one side of the reflective polarizing film, wherein

the reflection inhibitor layer comprises a tinted layer or an absorptive polarizer layer, the reflection inhibitor layer blocks light reflected from the reflective polarizing film."

B Different Feature

The Invention and the Cited invention are different in the following point at least.
(Different Feature)

Regarding the "reflective polarizing film article", the Invention includes the

following descriptions: "the reflective polarizing film article reduces glare, which is horizontally polarized light including light reflected from a horizontal surface and Rayleigh scattered light, when attached on only one side of a glazing substrate of a window so that a polarization block axis of the reflective polarizing film is horizontal and the reflection inhibitor layer is located on the reflective polarizing film to face the inside of the room"; "reduces horizontally polarized light to 90% or less of horizontally polarized incident visible light, and the film is attached to only one side of a glazing substrate of a window so that a polarization block axis of the reflective polarizing film is horizontal and the reflection inhibitor layer is located on the reflective polarizing film to face only the inside of the room", while the Cited Invention does not clearly describe the above configuration at least.

(3) Judgment

In the "optical film with dyed film" in the Cited Invention, "the optical films are suitable for use in fenestrations where diffuse transmission of light is desirable and transparency or clarity of the fenestration is either unnecessary or undesirable", and "the fenestration is essentially transparent to a first polarization of light but substantially reflects a second polarization of light, thereby eliminating or reducing glare".

In light of the above function, it is obvious that the "optical film with dyed film" in the Cited Invention is a material configured to "reduce glare, which is horizontally polarized light including light reflected from a horizontal surface and Rayleigh scattered light, when attached on only one side of a glazing substrate of a window so that a polarization block axis of the reflective polarizing film is horizontal and the reflection inhibitor layer is located on the reflective polarizing film to face the inside of the room" and "reduce horizontally polarized light to 90% or less of horizontally polarized incident visible light" (there is no difference as a material from the Invention). Thus, the above Different Feature should be interpreted as a problem of the use of a material, rather than a different feature on the configuration of a material, with the point, "attached to only one side of a glazing substrate of a window so that a polarization block axis of the reflective polarizing film is horizontal and the reflection inhibitor layer is located on the reflective polarizing film to face only the inside of the room". The appellant emphasizes in the written appeal that "the Invention is an invention which was completed by finding a specific and unpredictable effect which is inevitably produced when using a material having a specific configuration in an unobvious mode for a person skilled in the art, and the idea of use invention should be applied".

However, a person skilled in the art who has learned the contents of the Cited

Invention, especially the description, "the fenestration is essentially transparent to light of a first polarization but substantially reflects light of a second polarization, thereby eliminating or reducing glare", would immediately conceive the idea that the "optical film with dyed film" in the Cited Invention has such attributes as "reducing glare, which is horizontally polarized light including light reflected from a horizontal surface and Rayleigh scattered light, when attached on only one side of a glazing substrate of a window so that a polarization block axis of the reflective polarizing film is horizontal and the reflection inhibitor layer is located on the reflective polarizing film to face the inside of the room" and "reducing horizontally polarized light to 90% or less of horizontally polarized incident visible light". A person skilled in the art who has learned the contents of the Cited Invention, especially the description, "the optical film is suitable for use in fenestrations where diffuse transmission of light is desirable and transparency or clarity of the fenestration is either unnecessary or undesirable", would immediately comprehend that the "optical film with dyed film" in the Cited Invention is suitable for use when "attached to only one side of a glazing substrate of a window so that a polarization block axis of the reflective polarizing film is horizontal and the reflection inhibitor layer is located on the reflective polarizing film to face only the inside of the room".

Thus, the Invention, which does not fall under discovering an unknown attribute; i.e., the "optical film with dyed film" in the Cited Invention, cannot be a use invention. The Invention, which also does not fall under an invention based on finding of adaptability of the material in the Cited Invention for novel use, cannot be a use invention.

As described above, based on the "optical film with dyed film" in the Cited Invention, a person skilled in the art could have conceived of the use described as "attached to only one side of a glazing substrate of a window so that a polarization block axis of the reflective polarizing film is horizontal and the reflection inhibitor layer is located on the reflective polarizing film to face only the inside of the room". Thus, it can be said that the material "optical film with dyed film" in the Cited Invention and the use described as "attached to only one side of a glazing substrate of a window so that a polarization block axis of the reflective polarizing film is horizontal and the reflection inhibitor layer is located on the reflective polarizing film to face only the inside of the room" are a unit (unified entity) in the above meaning.

(4) Regarding the effect of the Invention

The specification of the Application does not clearly describe the effect of the

Invention.

However, there is the following description in [0004] in the specification of the Application: "Also disclosed are glazing units. The disclosed glazing units comprise at least one glazing substrate, at least one reflective polarizing film, and at least one reflection inhibitor layer. The reflective polarizing film reduces transmission of polarized light with a polarization block axis that is horizontal, and the reflective polarizing film reduces the horizontally polarized light to 90% or less of the horizontally polarized incident visible light."

Even if the above description is comprehended as an effect of the invention, it is only a feature included in the Cited Invention.

There is the following description in [0041] in the specification of the Application: "The glare reducing glazing articles and units of this disclosure also comprise a reflection inhibitor layer. This reflection inhibitor layer reduces the amount of reflected unpolarized visible incident light. In some uses, where, for example, the glazing substrate is a window, it may be desirable to have the reflection inhibitor layer on the surface that faces in the inside of the room such that when a person looks out the window he or she does not see his or her reflection. In other uses, it may be desirable to have the reflection inhibitor layer on the surface that faces the outside environment to manage the exterior reflection."

Even if the above description is comprehended as an effect of the invention, it is also a feature included in the Cited Invention.

Even if the use alleged by the appellant and effects thereof (glare reduction effects comprehended from [0110], [0111], and [Table 2] of the Application) are comprehended, they are merely within a scope which can be predicted by a person skilled in the art, as described in (3).

(5) Summary

The Invention is an invention described in the Cited Document 1 or could have been easily made by a person skilled in the art on the basis of the invention described in Cited Document 1.

No. 3 Closing

As described above, since the Invention is an invention that falls under the provisions of Article 29(1)(iii) of the Patent Act, the appellant should not be granted a patent for the Invention, or the appellant should not be granted a patent for the Invention under the provisions of Article 29(2) of the Patent Act. Thus, the Application should

be rejected without examining inventions according to other claims.

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

October 16, 2019

Chief administrative judge: SATOMURA, Toshimitsu

Administrative judge: HIGUCHI, Nobuhiro

Administrative judge: KAWAHARA, Tadashi