

# **PATENT COURT DECISIONS**

**2021**

**International IP Law Research Center  
of Patent Court of Korea**

## PATENT COURT DECISIONS

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# FOREWORD

Greetings.

The COVID-19 pandemic has changed our everyday lives—from politics, economics, education, culture, international exchanges to the way we work and spend leisure time. Such changes also have left a huge impact on our fundamental perspectives on human beings, objects, and society. In this era, it is imperative to turn such challenges into an opportunity to leap forward, and the key to solving the task lies in intellectual property.

International IP Law Research Center, established in May 2017, with the aim of carrying out systematic international communication and comparative legal research, has diligently put efforts toward strengthening and boosting the practical expertise of the Patent Court specializing in cases of intellectual property rights. In particular, in 2021, the center conducted comparative legal research under the theme of "Indirect infringement of Patents" and "Employee's Invention" and published the revised Korean-English/English-Korean IP Law Dictionary containing terms of the law of copyright. The center will find good topics for research this year as well and continue to carry out in-depth research.

The Patent Court also hosts the International IP Court Conference every fall to promote communication and cooperation among judges specializing in IP across the world. At the seventh International IP Court Conference in November 2021, IP judges and legal experts from 10 countries—Korea, the U.S., Britain, Germany, Switzerland, Australia, China, Japan, India, and Turkey—joined forces to vigorously

introduce practices of each country regarding various issues in the field of IP law, had a heated debate and in-depth discussions. I am confident about the precious results of the conference as it will serve as the backbone of the comparative legal research of major issues in IP rights.

Cyberspace is a world where all the nations are interconnected and because of this, one nation's judgment on an IP case can be recognized in another country as IP disputes take place in several countries at the same time. The 2021 Patent Court Decision, translated in English, includes twelve major decisions rendered by the Patent Court in 2021. It is aimed to help you better understand matters such as the scope of hearing for a patent cancellation action, how should patent invention that is an employee's invention be determined, the similarity of an appearance when judging similarity of trademarks, how should the trademark being used with unlawful purposes be determined, how should similarity between designs be determined. I hope that the book will be a helpful source for those who are interested in Korean IP laws.

I would like to extend my deepest gratitude to the center's research fellows and a researcher involved in publishing the book for their hard work.

April 2022  
Director of the International IP Law Research Center  
Chief Judge of the Patent Court of Korea  
Yongsuk KIM

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The issue was whether the decision made by Intellectual Property Trial and Appeal Board (IPTAB) to accept the request for patent cancellation is out of its' hearing scope. In this regard, Article 132-2(2) of the Patent Act stipulates that “No petition for patent revocation may be filed on a ground based on prior art published in the patent gazette under Article 87(3)(vii).” Also, Article 87(3)(vii) of the Patent Act specifies the “information about prior art, if the ground for rejection the notice of which has been given... includes information about prior art.” The court decided, based on Article 132-2(1) and (2) of the Patent Act and Article 132-10(1) of the Patent Act, that the scope of an ex officio hearing of the request for patent cancellation by the IPTAB shall not be restricted by what is specified in Article 132-2 of the Patent Act. Furthermore, the court determined that even if the request for patent cancellation may not be filed under Article 132-2(2) of the Patent Act on the ground that the granted patent lacks an inventive step based on the prior art published on the patent gazette and the Notice of Grounds as to the same as an office action in the prosecution of a patent application, the request for patent cancellation may be filed on the ground that the granted patent lacks an inventive step over the combination of the prior art and other prior arts. Hence, the court rejected the plaintiff's argument that the IPTAB decided to accept the request for patent cancellation by hearing and determining only based on the prior art included in the Notice of Grounds for Rejection of an application for the patented invention at issue.

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The issue of this case was whether it is out of the scope of divisional patent application prescribed by Article 52(1) of the Old Patent Act (before being amended by Act No. 12753, June 11, 2014; hereinafter, the “Old Patent Act”)

to attach an electronic file of a sequence listing not stated in the specification of the original patent application to the divisional patent application based on the international patent application in a foreign language. The court deemed it reasonable that, since Article 201(6) of the Old Patent Act regards not the international patent application but its Korean translation as the specification of the international patent application in a foreign language, the term “the specification or drawings accompanying the initial patent application” based on which the scope of a divisional patent application is determined when applying Article 52(1) of the Old Patent Act shall refer to the Korean translation of the specification, claims and drawings (limited to the captions in the drawings) submitted on the international filing date. Also, the court deemed that the divisional patent application at issue may not be regarded as a legitimate divisional patent application, because the divisional patent application at issue which included the sequence listing not attached to the original patent application does not fall within the scope of matters stated in the initial specification of the original patent application based on which the divisional patent application under Article 52(1) of the Old Patent Act was filed, based on the following facts: that the sequence listing is a part of the specification; that the intent of Clause 49.5 of the Regulations under the PCT is that a translation shall not be required for language-neutral expressions on the premise that the translation is required where free text is stated in a foreign language and not Korean; and that the skilled person in the art may not clearly understand the sequence listing in the divisional patent application for the original patent application based on an international patent application. Hence, the court affirmed the Intellectual Property Trial and Appeal Board (IPTAB) decision that had denied the divisional patent application.

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The issue of this case was whether the plaintiff’s petition for an action for affirmative adjudication on the scope of rights is lawful. In this regard, the Supreme Court held that the challenged invention specified by the petitioner

and the invention practiced by the respondent (hereinafter, the “practiced invention”) shall have identical elements, and that since the identity of the practiced invention relates to the determination of whether the respondent practices the challenged invention, the identity shall be recognized only where it seems that the practiced invention is identical from a factual perspective. The court rendered that, of the components (hereinafter, the “challenged component”) of the defendant’s lighting creation device, the challenged invention, specified by a patentee, the plaintiff, challenged component 4 was intentionally formed, and thus, it shall be deemed that the lighting creation device has the specific component at all times. Further, the court did not recognize the practiced invention as the same component from the factual perspective on the following grounds: the allegedly practiced invention that the defendant presented in the adjudication does not have a component compared with challenged component 4; even if the lighting creation device is used in the natural terrain features, it may not be deemed that the device has a wide leaf surface and unit projections split by cut grooves all the time as the challenged component 4 does; and the lighting creation device may not be regarded as a component formed intentionally. Thus, the court affirmed the Intellectual Property Trial and Appeal Board (IPTAB) decision that the plaintiff’s petition for an action for affirmative adjudication on the scope of rights was subject to an invention, which may not be viewed as being practiced by the defendant and thus, unlawful and without the benefit of confirmation.

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The issue of this case was whether the patented invention at issue constitutes an employee’s invention of the plaintiff, who is an employee of the defendant, and thus, the defendant is liable for the compensation for the employee’s invention. The court recognized that the content and drawing of the invention stated in the proposal for the invention that the plaintiff submitted to the defendant are substantially identical to the specification of the patented invention but decided as the following: the plaintiff was not involved in the

preparation and completion of the diesel particulate filter (hereinafter, the “DPF”) regeneration logic to remove particulate in an engine through burning; and it may not be deemed that the plaintiff substantially contributed to the creation of the patented invention by combining other technical ideas (A+B+D) through the removal of a specific technical idea (C) in the DPF regeneration. Further, the court held that it may not be presumed that the plaintiff substantially contributed to the creation of the patented invention in light of the following facts: the plaintiff submitted the proposal for invention containing the contents of the patented invention to the defendant after about 3 years had passed since engines to which a technology identical to the patented invention was applied were produced in a large volume; and the defendant had enforced policies to assign and compare departments’ allocations even before the mass-production. Hence, the court dismissed the plaintiff’s request for compensation for the employee’s invention.

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The issue of this case was whether the registration shall be invalidated, as the defendant’s mark “” (hereinafter, the “registered service mark”) is similar to “INSTA,” which is an abbreviation of “” and “” (hereinafter, the “prior-used service marks”), which are service marks to be perceived as the plaintiff’s source identifier, and the defendant, who is the applicant of the registered service mark, has any unlawful purpose. The court determined that the plaintiff’s prior-used service marks were perceived as the service marks of a particular source to domestic or foreign consumers in relation to providing a social networking service as of February 24, 2016, when the application for the defendant’s registered service mark was filed, in light of the following: how long the prior-used service marks had been used; what press media had reported; and how much the prior-used service marks were known through the internet for the period when they were used, etc. In addition, the court decided that the marks of the registered service mark and the prior-used service marks are similar on the following grounds: the prior-used service

marks are simply referred to as “Insta” in Internet blogs, news articles, etc.; the “MODEL” in the registered service mark is not distinctive in relation to the designated services; and both marks are referred to as “insta” and thus identical in terms of names and meanings. Furthermore, the court rendered that the defendant has an unlawful purpose to obtain unjust profits by taking advantage of business credit, etc., of the prior-used service marks on the following grounds: some designated services of the registered service mark fall within or are economically closely related to the service similar to the providing of a social networking service that uses the prior-used service marks; and the defendant could have known of the existence of prior-used service marks when the application for the registered service mark was filed.

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relation with the prior-used trademarks (아기밀 ~~푸드~~ 아기밀프레스 아기밀 후레쉬 FRESH ). First, the court determined that since a mark, which corresponds to a part of the prior-registered trademark (hereinafter, “Agimeal”) was not perceived to identify the usage of the goods, and the apparent composition and usage of the trademark did not draw the attention of the public exercising ordinary care, the part of “Agimeal” is only a descriptive mark with little or no distinctiveness. Furthermore, the court decided that the mark of “Agimeal” failed to acquire distinctiveness based on use on the grounds that the plaintiff did not register or use the mark composed only of “Agimeal,” and that the text “Agimeal” in the prior-registered trademark failed to acquire distinctiveness. Considering all these, the court held that the registered mark of the defendant does not fall under any of the grounds for invalidation argued by the plaintiff in that “Agimeal” of the prior-registered trademark was not a famous trademark in the marketplace of designated goods, and that the registered mark was markedly different from the prior-used trademark in terms of appearance.

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The issue of this case was whether an application for the plaintiff’s mark “GREVYI” (hereinafter, the “registered trademark”) was filed with unfair purposes by imitating “GREVI” (hereinafter, the “prior-used trademark”) used in Italy. The court determined that the prior-used trademark may be viewed as conspicuously perceived to indicate a particular source in relation to hats bearing the prior-used trademark when an application for the registered trademark was filed, in light of the following facts: the prior-used trademark has been used for about 20 years; hats bearing the prior-used trademark have been sold for about 127 years as of the date when the application for the registered trademark was filed; it seems that the sales of goods bearing the prior-used trademark and the sales of hats would be substantial; exports, advertisement, sponsorship, etc. Furthermore, the court held that the defendant filed an application for the registered trademark at issue with unjust purposes,

such as obtaining undue profits, etc., in light of the following facts: as the registered trademark at issue and the prior-used trademark are substantially similar in terms of appearance and identical in terms of names, there is a likelihood of confusion and misconception as to the source of goods among ordinary consumers; the goods to which the two trademarks are affixed are also identical or similar (hats) or economically closely related (raincoat, leisure raincoat, etc.); and it seems that the registered trademark was made by imitating the prior-used trademark.

**9. [Trademark] 2021Heo2267, decided July 2, 2021 (KALOOM Case)**

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The issue of this case was related to whether an applied trademark (KALOOM) shall not be registered as a trademark identical or similar to the



prior-registered trademark (카툼), a composite trademark composed of “car shape” and “KALOOM.” First, the court decided, based on a mark in its entirety, whether the prior-registered trademark is similar to the applied trademark. This is because the court deemed that since this shape of the prior-registered trademark is not yet well-known or famous in the marketplace of designed goods and the text is only a coined word, the prior-registered trademark is not distinctive on its own only with its shape or text. Further, the court regarded the comparison of the similarity of appearance as an important criterion in decision making—whether the applied trademark is similar to the prior-registered trademark by reflecting the current situation that products have recently been advertised and sold on audiovisual media. In other words, the court determined that the applied trademark at issue is composed of plain English letters, whereas the prior-registered trademark is composed of shapes and letters and that they are remarkably different in terms of not only meaning but also appearance due to the existence of a figure, the difference between the Korean alphabet and the English text, etc. As a result, the court held that the applied trademark at issue is not similar to the prior-registered trademark in that even if the applied trademark is used together with the prior-registered trademark, the applied trademark would not

be likely to mislead or cause confusion among consumers or traders as to the source of good in transactions of the designated good.

**10. [Trademark] 2021Heo2458, decided August 20, 2021 (ARGAN RICH Case) ..... 241**

The issue of this case was whether the applied trademark at issue (ARGAN RICH) constitutes the trademark indicating characteristics as stipulated by Article 33(1)(iii) of the Trademark Act. The court rendered that the applied trademark is the mark that makes ordinary consumers or traders intuitively recognize the quality, use, effect, etc., of the designated goods such as products “rich in argan oil” under its lexical meaning when the applied trademark is used in the relevant designated goods on the following grounds: words, such as “argan,” “argan rich,” “ARGAN RICH,” etc., are used to indicate characteristics on the internet, etc.; the applied trademark is a mark composed of “ARGAN,” “RICH,” and a space therebetween, and they are not words which general consumers or traders in Korea would have difficulty in understanding. Also, the court held that since the registration of an applied trademark shall be determined independently in relation to its designated goods under the Trademark Act, the distinctiveness of the applied trademark may not be recognized based only on the ground that the trademark similar to the applied trademark was registered home and abroad.

**11. [Design] 2020Na1346, decided November 27, 2020 (Laver Cultivation Net Case) ..... 253**

The issue of this case was whether the challenged design (hereinafter, the “defendant product”) for “laver cultivation net” to which the design is used infringes the registered design. The court determined the following: the part shared in the defendant’s product and the registered design was evaluated low in terms of its’ importance, as it was already publicly known in designs that had been used in existing laver cultivation nets; however, of the registered design in its entirety, essential parts that could easily draw attention from consumers are differences in the area and shape of the small mesh, the shape and form of thread, etc. Further, the court held that even if the registered

design has a complex and delicate impression as a whole due to the above differences from the defendant's product, its aesthetic sense is not identical or similar to the defendant's product since, in the latter, the small mesh loosely and irregularly hangs.

**12. [Design] 2020Heo5412, decided May 7, 2021 (Headboard Case)**

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The issue of this case was whether the defense for a freely exploited design based on the prior art could be acknowledged as a ground to limit the exercising the registered design right (the headboard for beds). First, the court decided that prior design 2 to be publicly disclosed, suggested being compared with the freely practiced design, in determining the defense because there is no sufficient evidence to deem that Non-Disclosure Agreement was entered into by and between the plaintiff and the defendant. Further, the court held that an exception of losing novelty does not preclude the defense that the design is freely exploited based on a publicly known design, as determining that the challenged design is not included in the scope of rights in the plaintiff's registered design without being compared with the registered design at issue in that only a publicly known design and the challenged design are compared for the defense that the design is freely exploited and that the challenged design to be compared with the registered design is a freely exploited design which could be created easily from prior design 2 by an ordinary designer in the furniture industry before the filing of the application for design registration.



**PATENT COURT OF KOREA**  
**FOURTH DIVISION**  
**DECISION**

**Case No.** 2019Heo8118 Cancellation (Patent)

**Plaintiff** A Co., Ltd.  
Representative B  
Counsels for Plaintiff  
Bae, Kim & Lee LLC  
Lawyers Jeonghee Park, Changhwan  
KIM, Ingyeong Choi  
IPCJ Patent & Law Firm  
Patent Attorney Hyeongdal Park  
Bae, Kim & Lee IP  
Patent Attorney Gilchae Park

**Defendant** Commissioner of the Korean Intellectual  
Property Office  
Counsel for Defendant  
Junghwan Choi

**Date of Closing Argument** October 14, 2020

**Decision Date** December 04, 2020

**ORDER**

1. The plaintiff's claim is dismissed.
2. The litigation cost arising from this litigation shall be borne by the plaintiff.

## PLAINTIFF'S DEMAND

The IPTAB Decision, 2018So122, dated September 27, 2019, shall be revoked.

## OPINION

### 1. Basic Facts

#### A. Patented Invention at Issue (hereinafter, the "Subject Invention")

- 1) Title of Invention: Flexible Plastic Film
- 2) Filing Date of Application/ Application Number: August 01, 2016/ No. 10-2016-0098075
- 3) Date of Registration/ Registration Number: May 23, 2018/ No. 10-1862251
- 4) Patentee: The Plaintiff
- 5) Claims (as amended, following the petition for correction dated September 18, 2019)

**【Claim 1】** A flexible plastic film comprising: a support substrate; and an ultraviolet curable coating layer formed on at least one surface of the support substrate, wherein the film exhibits a pencil hardness of 6H or more under a load of 750g, wherein no crack occurs when placing at an interval of 4mm in the middle of the film, allowing the film to stand while both sides of the film being folded at 90 degrees toward the bottom surface and being unfolded 100,000 times at room temperature, wherein the ultraviolet curable coating layer has a thickness of 3 to 20 $\mu$ m, wherein the substrate has a thickness of 20 to 200 $\mu$ m

m, wherein the substrate has an elastic modulus of 4 to 9GPa as measured according to ASTM D882, wherein the ultraviolet curable coating layer has an acrylate-based binder containing a 7- to 20-functional urethane acrylate-based binder and an inorganic fine particle, wherein the 7- to 20-functional urethane acrylate-based binder has a weight average molecular weight of 3,000 to 8,000g/mol a height lifted from the bottom surface is 0.5mm or less<sup>1)</sup>.

**【Claims 2, 3, and 4】 Deleted**

**【Claim 5】** The flexible plastic film according to claim 1, wherein the ultraviolet curable coating layer includes a cross-linked copolymer of a 3- to 6-functional acrylate-based binder and the 7- to 20-functional urethane acrylate-based binder and an inorganic fine particle having a bi-modal particle distribution including a first inorganic fine particle group with  $d_{50}$  of 20 to 35nm and a second inorganic fine particle group with  $d_{50}$  of 40 to 130nm.

**【Claim 6】** The flexible plastic film according to claim 5, wherein a weight ratio between the 3- to 6-functional acrylate-based binder and the 7- to 20-functional urethane acrylate-based binder is 1:9 to 4:6.

**【Claim 7】** The flexible plastic film according to claim 5, wherein the ultraviolet curable coating layer in 100 parts by weight includes the 3- to 6-functional acrylate-based binder in 10 to 50 parts by weight, the 7- to 20-functional urethane acrylate-based binder in 40 to 70 parts by weight, the first inorganic fine particle group in 5 to 50 parts by weight, and the second inorganic fine particle group in 5 to 50 parts by weight.

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1) Of the claims of the Subject Invention, the disclosure “3,000 to 8,000g/mol and” is a clerical error of “3,000 to 8,000g/mol” (Neither parties argue in this respect; see the Protocol of Pleadings).

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**【Claim 8】** The flexible plastic film according to claim 5, wherein the first inorganic fine particle group and the second inorganic fine particle group are the same or different and each independently surface-modified with any one or more silane coupling agents selected from the group consisting of (meth)acrylsilane, methacroxysilane, vinylsilane, epoxysilane, and mercaptosilane.

**【Claim 9】** The flexible plastic film according to claim 5, wherein the first inorganic fine particle group has  $d_{10}$  of 10 to 19nm and  $d_{90}$  of 25 to 40nm, and the second inorganic fine particle group has  $d_{10}$  of 25 to 110nm and  $d_{90}$  of 60 to 150nm.

**【Claim 10】** The flexible plastic film according to claim 5, wherein a weight ratio between the first inorganic fine particle group and the second inorganic fine particle group is 9:1 to 3:7.

**【Claim 11】** The flexible plastic film according to claim 1, wherein one or more support substrates are selected from the group consisting of polyimide (PI), polyimideamide, polyetherimide (PEI), polyethyleneterephthalate (PET), polyethylenenaphthalate (PEN), polyetheretherketone (PEEK), cyclic olefin polymer (COP), polyacrylate (PAC), polymethylmethacrylate (PMMA), and triacetylcellulose (TAC).

**【Claim 12】** The flexible plastic film according to claim 1, further comprising an antistatic layer or a low refractive index layer on the upper surface or the lower surface of the ultraviolet curable coating layer.

**【Claim 13】** The flexible plastic film according to claim 1, wherein a crack does not occur when wound on a mandrel with a diameter of 4mm.

6) Main Content of Invention

As per Appendix 1.

**B. Prior Arts**

1) Prior Art 1 (Plaintiff's Exhibit 4-1)

Prior Art 1 relates to a "Plastic film" posted on the Open-laid Gazette (No. KR1020140113423) on September 24, 2014, and its main content is as disclosed in Appendix 2.

2) Prior Art 2 (Plaintiff's Exhibit 8)

Prior Art 2 relates to a "Protective adhesive film, screen panel and mobile electronic terminal" posted on the Open-laid Gazette (No. KR10200823641) on March 14, 2008, and its main content is as disclosed in Appendix 3.

3) Prior Art 3 (Plaintiff's Exhibit 9)

Prior Art 3 relates to a "Film with protective coating layer" posted on the Japan Open-laid Gazette (No. JP2015003516) on January 08, 2015, and its main content is as disclosed in Appendix 4.

4) Prior Art 4 (Plaintiff's Exhibit 10)

Prior Art 4 relates to a "hard coating film" published in the Open-laid Gazette (No. KR101411006) on June 23, 2014, and its main content is as disclosed in Appendix 5.

5) Prior Art 5 (Plaintiff's Exhibit 11)

Prior Art 5 relates to an "Optical film, Anti-reflection Film, Polarizing Plate and Liquid Crystal Display Device" posted on the Open-laid Gazette (No. KR20110052656) on May 18, 2011, and its main content is as disclosed in Appendix 6.

### C. Procedural History

1) On October 11, 2018, C filed an action for patent cancellation of the Subject Invention against the plaintiff (2018So122) and argued that since the entirety of the claims of the Subject Invention could easily be invented from the prior arts by a person with ordinary skill in the art (hereinafter, a “skilled person”) and the inventive step thereof could be denied, the patent thereto shall be revoked.

2) On July 24, 2019, the Intellectual Property Trial and Appeal Board (hereinafter, the “IPTAB”) sent a Notice of Grounds for Cancellation to the plaintiff regarding the Subject Invention, stating that the denial of inventive step of the Subject Invention based on the prior art, etc., and provided an opportunity to submit written argument. The plaintiff filed for correction of the invention’s scope of claims 1 and 5 on September 18, 2019.

3) On September 27, 2019, the IPTAB rendered a decision to accept the request for patent cancellation, stating that ① the petition for correction shall be accepted and the correction shall be granted; and ② the inventive step of Claim 1, the Inventions of Claims 5, 8, 9, and 10, the Inventions of Claims 6 and 7, and the Inventions of Claims 11-13 is denied by Prior Art 1 or Prior Arts 1-3, Prior Art 1 or Prior Arts 1-4, Prior Art 1 or Prior Arts 1-4, and the prior arts, respectively (hereinafter, the “Subject Decision”).

**【Factual Basis】** Undisputed facts, statements in the plaintiff’s exhibits 1-4 and 8-11, and the defendant’s exhibits 15-17 (including exhibits with branching numbers, if any), the purport of the overall argument.

## 2. Whether IPTAB Erred

### A. Summary of Parties' Arguments

#### 1) Defendant (Grounds for cancellation of the patent)

The inventive step of the Inventions of Claims 1, 11, and 13, the Inventions of Claims 5–10, and Claim 12 is denied by the combination of Prior Arts 1–3 and a well-known art, the combination of Prior Arts 1–4 and a well-known art, and the combination of prior arts 1, 2, 3, 5, and a well-known art. Hence, the patent to the Subject Invention shall be revoked in its entirety.

#### 2) Plaintiff (Grounds for cancellation of decision)

a) Prior arts 1 and 5 are included in the grounds for rejection raised with respect to the application for the Subject Invention. Further, the Subject Decision was reviewed and decided on the grounds based on prior arts 1 and 5. Hence, the Subject Decision erred in exceeding the scope of the hearing as to the request for cancellation of the patent and thus, shall be revoked.

b) The inventive step of the Subject Invention is not denied by the prior arts on the following grounds. The IPTAB decision inconsistent with the above is thus erroneous and shall be revoked.

(1) The Subject Invention is different from prior arts 2, 4, and 5 to be applied to flat display products and prior arts 1 and 3 to be applied to curved display products, in that the Subject Invention provides a flexible plastic film that could be applied to foldable display products. The Subject Invention includes the following as technical elements for the “bending stability”<sup>2)</sup>: ① a thickness of the

- 
- 2) The plaintiff argues that a disclosure in the claims of the Subject Invention “with an interval of 4mm in the middle, allowing the film to stand while both sides being folded at 90 degrees toward the bottom surface at room temperature, and then being unfolded on a flat bottom surface 100,000 times, a

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ultraviolet curable coating (3 to 20 $\mu$ m); ② an elastic modulus of support substrate (4 to 9GPa); and ③ “7- to 20-functional urethane acrylate-based binder”, etc. Further, the elements cannot be easily conceived from the prior art, which lacks a critical view on the stability against repetitive bending.

(2) An effect of the Subject Invention cannot be easily conceived from the prior art depending on the difference in composition and mechanical properties of the support substrate and coating layer. ① The Subject Invention has an effect, which is different from that of the prior art in that the former discloses, as specified in the claims, in relation to the “bending stability” to be attained simultaneously with hardness, that a crack would not occur, when with an interval of 4mm in the middle, allowing the film to stand while both sides being folded at 90 degrees toward the bottom surface at room temperature, and then being unfolded on a flat bottom surface 100,000 times. ② Also, the Subject Invention has a significant effect compared to the prior arts in that the former achieves the “bending stability” as stated above.

(3) In light of the difference in technical ideas in the prior art, it may not be deemed that the skilled person could easily arrive at the combination of the prior arts.

### **B. Whether the Subject Decision Is out of the Scope of Review for Patent Cancellation Request**

#### 1) Relevant Provisions

The Patent Act Article 132-2(2) provides that “no petition for patent cancellation may be filed on a ground based on prior art posted on the

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crack of 1 cm or longer would not occur” falls under corresponds to the “bending stability”, which is one flexibility in a plastic film of the Subject Invention.

Patent Gazette under Article 87(3)(vii).” Also, Article 87(3)(vii) of the same Act stipulates that “information about prior art, if the ground for rejection the notice of which has been provided ... includes information about prior art.”

## 2) Plaintiff’s Arguments

a) ① As the plaintiff filed an application for the Subject Invention, the patent examiner sent a Notice of Grounds for Rejection of inventive step to the plaintiff on October 19, 2017, stating that its inventive step is denied by 2 prior arts (Plaintiff’s Exhibit 12-2). Of the prior arts, one was the invention, which corresponds to Prior Art 1, was posted on the public gazette for international applications under the PCT (WO 2014/142581, Plaintiff’s Exhibit 5). The other one was Prior Art 5. Thereafter, the information of the 2 prior arts above was posted on the Open-laid Gazette of the Subject Invention for which the registration of grant of patent was completed (Plaintiff’s Exhibit 2). ② The IPTAB rendered the Subject Decision as examined above on the ground that the inventive step of Claim 1, the Inventions of Claims 5, 8, 9, and 10, the Inventions of Claims 6 and 7, and the Inventions of Claims 11 to 13 is denied by Prior Art 1 or 1 to 3, Prior Art 1 or 1 to 4, Prior Art 1 or 1 to 4, and prior arts 1 to 5, respectively.

b) It shall be deemed that the IPTAB reviewed and determined the discussion based on prior arts 1 and 5 and rendered the Subject Decision, because ① prior arts 1 and 5 are included in the grounds for rejection raised in relation to the application of the Subject Invention, and ② the Subject Decision purports that the inventive step of the Subject Invention is substantially denied by Prior Art 1. Hence, the Subject Decision shall be revoked as it is out of the scope of the patent cancellation request.

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### 3) Discussion

It may not be deemed that the Subject Decision is out of the scope of the patent cancellation request on the following grounds. Hence, the plaintiff's arguments thereagainst the above are not accepted.

a) Article 132-2(1) of the Patent Act provides that, where the inventive step of a patent is denied by an invention posted on publication distributed in the Republic of Korea or in a foreign country or an invention disclosed to the public via telecommunication lines prior to the filing of a patent application, any person may petition for patent cancellation to the Director of the IPTAB within six months from the date of registration to the date of the publication of registration. The purpose is to reinforce the verification of patents by having an examiner quickly make decisions on whether to cancel a patent, upon the offering of any person to the IPTAB with grounds for cancellation of a patent with a defect based on the prior art.

b) Article 132-2(2) of the Patent Act stipulates that "no petition for patent cancellation may be filed on a ground based on prior arts posted on the Patent Gazette under Article 87(3)(vii)." Further, Article 132-10(1) and Article 132-10(2) of the same Act provide that "with respect to a petition for patent cancellation, an examiner may examine even the grounds for patent cancellation not pleaded by the petitioner, the patentee, or interveners" and "with respect to a petition for patent cancellation, an examiner shall not review any claim not filed by the petitioner," respectively. However, the Patent Act does not limit the scope of the petition for patent cancellation otherwise.

The plaintiff's argument presumed otherwise, i.e., it shall be deemed that the IPTAB may review the petition for patent cancellation ex officio only within the limits stipulated by Article 132-2 of the same Act. Thus, the plaintiff's argument cannot be accepted.

c) Even if a petition for patent cancellation may not be filed

on the ground that the inventive step is denied based on prior arts posted on the patent gazette and raised as a ground for rejection in the examination under Article 132-2(2) of the Patent Act, it would be reasonable to deem that the petition for patent cancellation may be filed on the ground that the inventive step is denied by such prior art in combination thereof with other prior art.

Hence, even if the plaintiff's arguments above are accepted without change, a ground of the Subject Decision is that the inventive step of Claim 1, the inventions of Claims 5 to 10, and the inventions of Claims 11 to 13 are denied by the combination of prior arts 1 to 3, the combination of prior arts 1 to 4, and the combination of prior arts 1 to 5, respectively. Since the Subject Decision includes the statement that the inventive step of the Subject Invention is denied by the combination of prior art other than prior art 1 or 5, it may not be deemed that the IPTAB rendered the Subject Decision by reviewing and made a decision only on the grounds based on prior art 1 and 5. However, there is no ground to deem that the purpose of the Subject Decision is to deny the inventive step by Prior Art 1, as argued by the plaintiff.

### **C. Whether Claim 1 Lacks An Inventive Step**

#### 1) Relevant Laws

a) When determining an inventive step of an invention, the scope and details of the prior art, the difference between prior arts and an invention whose non-obviousness shall be determined, the technological level of a skilled person, etc., shall be identified based on materials, such as records, proof, etc., and then it shall be examined whether a skilled person could overcome the above differences in light of the technological level at the time when a patent application was filed and easily come up with the invention from the prior art. In this case, it shall not be determined in hindsight

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whether the invention could be easily invented by a skilled person as assuming that a skilled person already knows the technology disclosed in the specification of the invention whose non-obviousness shall be determined (Supreme Court Decision, 2006Hu138, dated August 24, 2007; Supreme Court Decision 2007Hu3660, dated November 12, 2009; Supreme Court Decision 2014Hu2184, dated November 25, 2016).

b) Also, where a claim of an invention is comprised of more than one elements the technical idea of the whole claim, organically combined, shall be the basis to determine the inventive step of an invention rather than relying on each element. In determining whether an invention has an inventive step, we should assess the constitutional difficulty as a whole, aiming to solve the problem in its own way rather than examining whether each element is publicly known, after decomposing an invention into more than one element stated in a claim. Further, when determining an inventive step by citing prior art references, the inventive step is not acknowledged if a skilled person could easily arrive at the invention in light of the following: the prior art references have implications, motivations, etc., that the invention could be made by combining the technology so cited; or the technical level, common knowledge in the technology, a basic problem in the field of the invention, development trends, a demand in the field, etc. (Supreme Court Decision 2005Hu3284, decided September 06, 2007; Supreme Court Decision 2013Hu2620, decided July 23, 2015; Supreme Court Decision 2016Hu564 decided June 28, 2018).

c) In the case of a claimed invention which uses a specific numerical value to express the scope of its element for the invention publicly known before its application, the invention lacks the requisite inventive step since a skilled person in the art can properly derive through ordinary and repetitive experiments unless substantial difference in effect occurs within the limited numerical range, except the case where the numerical limitation is not supplementary due to

the other elements added to the invention makes it be acknowledged to be inventive. If a claimed invention has a common problem with publicly known inventions and there is a difference only in the numerical limitation, it may not be deemed, without special circumstances, that the numerical limit may yield a significant effect, unless the application of the claimed invention discloses a critical significance, etc. (Supreme Court Decision 2004Hu448, decided April 15, 2005; Supreme Court Decision 2007Hu1299, decided November 16, 2007).

d) The claims of a claimed invention disclose what an applicant wants to protect as a patent. Hence, the content of an invention shall, without special circumstances, be finalized depending on the matters disclosed in the claims, and the claims shall not be limited or extended by other disclosures in an application, such as the description of the invention, drawings, etc. These legal principles also apply to the case where the claims in the claimed invention are disclosed with the functional expressions such as function, effect, property, etc., not ordinary structure, method, substance, etc. Thus, where the claims of a claimed invention specify the invention with a function, effect, property, etc., they shall, in principle, be construed to mean all inventions having the function, effect, property, etc., as disclosed in the claims. However, the technical meaning of what is disclosed in the claims can be understood correctly only in light of the description of the invention, drawings, etc. Where the special meaning of a term disclosed in the claims is different from what is defined or explained in the description of the invention or drawings, the meaning of the term shall be determined objectively and rationally after reviewing its intended technical meaning based on its general meaning (Supreme Court Decision 97Hu990, decided December 22, 1998; Supreme Court Decision 2006Hu3625, decided October 25, 2007; Supreme Court Decision 2007Hu4977, July 23, 2009).

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2) Composition Comparison with Prior Art 1

Based on the classification of elements in Claim 1 presented by the plaintiff and the defendant, its elements and the corresponding elements in Prior Art 1 are compared as follows:

Element	Claim 1	Prior Art 1
1	A flexible plastic film comprising: a support substrate; and an ultraviolet curable coating layer formed on at least one surface of the support substrate	A flexible plastic film comprising: a support substrate; and an ultraviolet curable coating layer formed on at least one surface of the support substrate. (Claim 1)
2	wherein the film exhibits a pencil hardness of 6H or more under a load of 750g, wherein no crack occurs when placing at an interval of 4mm in the middle of the film, allowing the film to stand while both sides of the film being folded at 90 degrees toward the bottom surface and being unfolded 100,000 times at room temperature,	[0095] ... the plastic film of the present invention may have a pencil hardness of 6H or more ... under a load of 1kg. [0099] <Table 2> ... is disposed on a plane after being exposed to a temperature of 50°C or higher at a humidity of 80% or higher for 70Hours, the maximum distance at which each edge or side of the plastic film is spaced apart from the plane may be approximately 1.0mm or less, approximately 0.6mm or less. [0153] Cylindrical bending test - Each of the plastic films was wound on a cylindrical mandrel having a diameter of 3cm, and cracking occurrence was examined.
3	wherein the ultraviolet curable coating layer has a thickness of 3 to 20µm, wherein the substrate has a thickness of 20 to 200µm	The plastic film of claim 1, wherein the coating layer has a thickness of 50 to 300µm (Claim 20) [0025]... the support substrate having a thickness of approximately 30 to approximately 1,200µm ... may be used.

Element	Claim 1	Prior Art 1
4	wherein the substrate has an elastic modulus of 4 to 9GPa as measured according to ASTM D882.	
5	A flexible plastic film ... wherein the ultraviolet curable coating layer has an acrylate-based binder containing a 7- to 20-functional urethane acrylate-based binder and an inorganic fine particle, wherein the 7- to 20-functional urethane acrylate-based binder has a weight average molecular weight of 3,000 to 8,000g/mol.	A plastic film ... wherein the coating layer includes a cross linked copolymer, in which a 3- to 6-functional acrylate-based monomer and a caprolactone group-containing multifunctional acrylate-based compound are copolymerized at a weight ratio of 5:5 to 8:2, and an inorganic fine particle dispersed in the cross linked copolymer (Claim 1)

### 3) Technical Meaning of Claim 1

We will examine the technical meaning of Claim 1 to determine whether the elements have a constitutional difficulty as a whole when closely combined.

a) According to what is stated in the claims, Claim 1 is analyzed as follows: ① a plastic film of Claim 1 contains a support substrate and a UV curable coating layer (formed on at least one side of the support substrate); ② the support substrate has a thickness of 20 to 200µm and an elastic modulus of 4 to 9GPa when measured in accordance with ASTM D882; ③ the UV curable coating layer has a thickness of 3 to 20µm and contains an inorganic fine particle and acrylate-based binders including 7- to 20-functional urethane acrylate-based binder which has a weight average molecular weight of 3,000 to 8,000g/mol; and ④ a plastic film of Claim 1 is a flexible film which has the pencil hardness of 6H or more at a load of 750g and generates no crack when both sides thereof are folded at 90 degrees toward the bottom surface and are unfolded 100,000 times at room temperature.

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b) In summary, a plastic film of Claim 1 is as follows: i) to contain the following: ① a support substrate; and ② a UV curable coating layer containing an inorganic fine particle and acrylate-based binders including urethane acrylate-based binder (hereinafter, “**Element (a)**”); ii) to control the following: ① a thickness and elastic modulus of the support substrate; and ② a thickness of a UV curable coating layer, the number of urethane acrylate-based binders contained therein, and weight average molecular weight (hereinafter, “**Element (b)**”); and iii) specifically, to limit each numerical value as follows: ① a thickness and an elastic modulus of the support substrate to “20 to 200 $\mu\text{m}$ ” and “4 to 9GPa measured in accordance with ASTM D882,” respectively; and ② a thickness of the UV curable coating layer, the number of functional groups in the urethane acrylate-based binder contained in the UV curable coating layer, and the weight average molecular weight to “3 to 20 $\mu\text{m}$ ,” “7- to 20-functional,” and “3,000 to 8,000g/mol,” respectively (hereinafter, “**Element (c)**”).

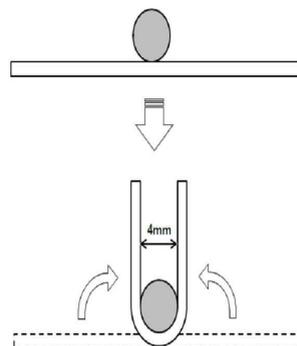


FIG. 1 of the Subject  
Invention

In determining whether Claim 1 is inventive, it would be preferred to determine whether the elements of Claim 1 are difficult as a whole when closely combined based on its solution to the problem by analyzing Elements (a), (b), and (c) as shown above to decompose a plurality of elements stated in the claims into Elements 1 to 5 as the plaintiff and the defendant suggest and review whether each element so decomposed is publicly known.

c) On the other hand, Claim 1 includes the following disclosures: ① “wherein the film exhibits a pencil hardness of 6H or more under a load of 750g, wherein no crack occurs when placing at an interval of 4mm in the middle of the film, allowing the film to stand while both sides of the film being folded at 90 degrees toward

the bottom surface and being unfolded 100,000 times at room temperature”; and ② “flexible” (together hereinafter, the “**Property Statements**”). The Property Statements constitute the functional expression of a function, effect, property, etc., rather than an ordinary structure, method, substance, etc.

(1) Here, we will examine the “flexible” under ② above. The specification of the Subject Invention states that “in the present invention, ‘flexible’ means a state having flexibility to such an extent that cracks of 3mm or more in length do not occur when wound on a cylindrical mandrel with a diameter of 4mm” ([0021]). It may be deemed that the disclosure above means that “cracks of 3mm or more in length would not occur when wound once with a diameter of 4mm” as the plaintiff argues. On the other hand, selective disclosures, such as “4 or 3mm,” are also found in the specification of the Subject Invention to the effect that, “for example, the flexible plastic film of the present invention can exhibit flexibility to such an extent that cracks do not occur when wound on a cylindrical mandrel with a diameter of 4mm or 3mm.” ([0088]). However, it may not be deemed that this would not far exceed the technical meaning of the disclosures shown above. However, the disclosure of “flexible” is, as to be examined below, only a technical premise of Claim 1 but not a critical part of the technical features.

(2) Above all, of the Property Statements, the disclosure of “wherein the film exhibits a pencil hardness of 6H or more under a load of 750g, wherein no crack occurs when placing at an interval of 4mm in the middle of the film, allowing the film to stand while both sides of the film being folded at 90 degrees toward the bottom surface and being unfolded 100,000 times at room temperature” under ① shown above relates to an effect of Claim 1 containing technical features. Here, we will examine the disclosure of “wherein no crack occurs.”

The specification of the Subject Invention discloses that “the flexible

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plastic film according to an embodiment of the present invention ... with an interval of 4mm in the middle, allowing the film to stand while both sides being folded at 90 degrees toward the bottom surface at room temperature, and then being unfolded on a flat bottom surface 100,000 times, a crack of 1cm or longer would not occur” ([0020]). Based on this disclosure, the plaintiff argues that the disclosure that “a crack ... would not occur” technically means that “a crack of 1cm or longer would not occur when being folded 100,000 times with a bending diameter of 4mm.”

However, the specification of the Subject Invention also states that “in measuring such stability, the flexible plastic film of the present invention has no crack of 1cm or longer or 3mm or longer even after being bent 100,000 times. Practically, no crack occurs” ([0029]) and “after repeating 10,000 times, the film was peeled off and checked whether cracks occurred (OK, NG)” ([0175]). Even in light of the description of the invention in the specification of Claim 1, the flexibility as to the “bending stability” that Claim 1 intends to achieve is uncertain as follows: whether both sides with an interval of 4mm in the middle are folded at 90 degrees toward the bottom surface at room temperature and then unfolded on a flat bottom surface at room temperature “100,000 times” as argued by the plaintiff or stated in claims or “10,000” times; and a crack of “1cm” or longer would not occur as argued by the plaintiff or a crack of “3mm” or longer would not occur. Hence, it is doubtful whether the Subject Invention lays out a consistent technical idea as to the bending stability.

d) In principle, Claim 1 shall be construed to mean all inventions having the function, effect, property, etc., according to the Property Statements. However, it is more important to determine what Claim 1 states by construing the meaning of terms used in the Property Statements objectively and rationally in light of the description of the invention, etc., in the specification.

(1) Even if the meaning of the term disclosed in the

claims is transparent, the scope of rights in a patented invention shall be determined by deciding the technical elements expressed by the term in light of the description of the invention and drawings, provided that it is impossible to know the details of a technical element from the term (Supreme Court Decision 2007Hu883, decided June 14, 2007). The scope of rights or protection by a patent shall, in principle, be determined by matters disclosed in the claims. Where it is impossible to understand the details of a technical element only with the disclosure of a term as the claims specify an article with a function, effect, property, etc., the technical elements of a patented invention shall be determined in light of the description of the invention, drawings, etc. (Supreme Court Decision 2005Da77350, 77367, decided February 28, 2008).

(2) The above legal principle relates to the construction of the scope of rights in a patented invention specifying an article with functional expressions, such as a function, effect, property, etc., in claims. However, this may be deemed to be consistent with, among the related legal principles under 1), the legal principle under d) to the effect that “the technical meaning of matters disclosed in the claims can be understood only by referring to the description of the invention, drawings, etc. Hence, the details of the invention shall be determined by construing the meaning of a term objectively and rationally after reviewing the technical meaning to be expressed by the term in light of its general meaning, even where there are other circumstances, such as the fact that a special meaning of the term disclosed in the claims is defined or explained in the description of the invention or drawings in the specification.” This could be cited without change to the effect that the technical element of a patented invention shall be determined in light of the description of the invention, drawings, etc., where it is impossible to understand the details of a technical element only from the disclosure of the term, as the claims specify an article with a function, effect, property, etc., to determine the requirements for registration of a patented invention, including specifying an article with

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functional expressions, such as a function, effect, property, etc., in the claims.

(3) The followings are examined under the legal principles stated above.

(a) Claim 1 does not specify an article, i.e., the plastic film only with the Property Statements but limits as follows: the structure of the film with disclosures as to Element (a); and properties to be controlled and values of the control range with disclosures as to Elements (b) and (c). If the plaintiff intended to file an application for a patent in relation to all inventions in which Claim 1 has the function, effect, property, etc., according to the Property Statements, there would be no reason to limit the technical element further with the disclosures as to Elements (a), (b), and (c) as stated above.

(b) Also, the specification of the Subject Invention discloses that embodiments 1 to 7 show an effect of the Property Statements, which corresponds to a numerical scope of properties to be controlled in Elements (b) and (c) ([0095] to [0123], [0172] to [0184]). There is no dispute between the parties in this respect.

Table 3 of the Subject Invention

	Embodiment 1	Embodiment 2	Embodiment 3	Embodiment 4	Embodiment 5	Embodiment 6	Embodiment 7
Pencil hardness	7H	8H	7H	8H	6H	7H	6H
Haze	0.4%	0.3%	0.4%	0.4%	0.4%	0.3%	0.4%
Transmittance	91.9%	91.8%	92.0%	91.9%	91.9%	92.1%	91.7%
Bending test	4mm	4mm	4mm	4mm	3mm	4mm	3mm
Bending stability	100,000 times OK						
Recovery	OK						

However, if it is deemed that the technical element or the scope of rights in Claim 1 includes even inventions having a function, effect,

property, etc., according to the Property Statement but not falling within the numerical scope of properties to be controlled in Elements (b) and (c), it would irrationally extend the technical element or scope of rights in Claim 1 beyond what is disclosed in the specification unless there are special circumstances.

(c) It is difficult to deem that the Subject Invention describes the bending stability according to the Property Statements in a consistent way, as long as the specification of the Subject Invention unclearly discloses, as examined above, the following: whether both sides with an interval of 4mm in the middle are folded at 90 degrees toward the bottom surface at room temperature and then unfolded on a flat bottom surface “100,000 times” or “10,000” times; and a crack of “1cm” or longer or a crack of “3mm” or longer would not occur.

(d) It would be difficult to construe that Claim 1 means all inventions having such function, effect, property, etc. according to the Property Statements in that the disclosures in Elements (a), (b), and (c) limit a structure, substance, etc., in a concrete way and those embodiments falling within a numerical scope of properties to be controlled under Elements (b) and (c) are disclosed. From this, it shall be deemed that a special meaning of the term used in the Property Statements of Claims is explained concretely in the description of the invention in the specification.

(e) When construing the meaning of a term used in the Property Statements objectively and rationally in light of the disclosures of Claim 1 and the description of the invention, it would be reasonable to deem that, among the Property Statements in Claim 1, the details of a technical element that “wherein the film exhibits a pencil hardness of 6H or more under a load of 750g, wherein no crack occurs when placing at an interval of 4mm in the middle of the film, allowing the film to stand while both sides of the film being folded at 90 degrees toward the bottom surface and being unfolded 100,000 times at room temperature” are as specified in Elements 3, 4,

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and 5. The Parties do not argue in this respect.<sup>3)</sup> Hereinafter, we will examine concretely whether it would be easy to conceive Elements (a), (b), and (c) which are objective technical elements of Claim 1 including Elements 3, 4, and 5.

### 4) Analysis of Element (a)

a) As examined above, Element (a) of Claim 1 is that a plastic film includes a UV curable coating layer containing (1) a support substrate and (2) an inorganic fine particle and an acrylate-based binder including a urethane acrylate-based binder.

b) We will compare Element (a) with Prior Art 1.

(1) As specified in the table shown above, Prior Art 1 discloses a corresponding element of “a plastic film comprising: a support substrate; and an ultraviolet curable coating layer formed on at least one surface of the support substrate.” This is identical to the term “a plastic film, comprising: support substrate; and a UV curable coating layer” in Element (a).

(2) As shown in the above table, Prior Art 1 discloses a corresponding element that “a plastic film ... wherein the coating layer includes a cross linked copolymer, in which multi-functional acrylate-based monomer and a caprolactone group-containing multi-functional acrylate-based compound are copolymerized, and an inorganic fine particle dispersed in the cross linked copolymer.” This is not particularly different from the remaining part of Element (a) that the UV curable coating layer includes the acrylate-based compound (binder) and the inorganic fine particle.

(3) However, the acrylate-based compound in Prior Art 1 is different from Element (a) in that the former does not limit the same to the “urethane” acrylate-based compound.

c) The fact that the urethane acrylate-based compound is used

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3) See the first protocol of pleadings.

as an acrylate compound used in the UV curable hard coating agent, i.e., the fact that the urethane acrylate compound is used as a resin ingredient of the UV curable acrylate-based coating agent corresponds to common knowledge in the technological field for a skilled person at the time when the application for the Subject Invention was filed. The Parties do not argue in this respect.<sup>4)</sup>

Therefore, the difference that Prior Art 1 does not limit the acrylate-based compound to the “urethane” acrylate-based compound could be easily overcome by a skilled person based on common knowledge in the technological field as stated above. (In response, the plaintiff argues that the difference shown above could not be easily overcome from Prior Art 1, etc., whose essential element is polyrotaxane, on the ground that a binder in Claim 1 corresponds to an oligomer due to being limited to “7- to 20-functional” and “a molecular weight of 3,000 to 8,000g/mol” by Element ㉟. However, the ground above may be deemed only to mean that a numerical scope in Element ㉟ as shown above has a special technical meaning and would not be an obstacle in determining that an element to the effect that the plastic film in Element ㉠ includes the “urethane” acrylate-based binder could be easily conceived only on the ground shown above.)

d) On the other hand, the specification of Prior Art 1 discloses, as to the background art, that the “Open-laid Patent Gazette under No. 2010-0041992 in Korea discloses a plastic film composition using a binder resin containing an ultraviolet-curable polyurethane acrylate-based oligomer and eliminating monomers. However, the plastic film disclosed above has insufficient strength to replace a glass panel of a display with a pencil hardness of about 3H” ([0006]).

The plaintiff argues that, in light of such circumstances, Prior Art 1 excludes a urethane acrylate-based binder. However, the disclosure above only specifies that the hardness of the film disclosed in the

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4) See the first protocol of pleadings.

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Open-laid Patent Gazette under No. 2010-00411992 in Korea, among urethane acrylate-based binders, is 3H and thus insufficient to replace a glass panel, and thus it is difficult to determine that Prior Art 1 excludes the urethane acrylate-based binder itself. Thus, the plaintiff's arguments above cannot be accepted.

### 5) Analysis of Element ⑥

a) As examined above, Element ⑥ of Claim 1 controls ① the thickness and elastic modulus of a support substrate and ② the thickness of a UV curable coating layer and the number of functional groups and weight average molecular weight of urethane acrylate-based binder contained therein.

b) We will compare Element ⑥ with Prior Art 1.

(1) As specified in the table shown above, Prior Art 1 discloses that a corresponding element of “the coating layer has a thickness of 50 to 300 $\mu\text{m}$ ” and a corresponding element of “the support substrate has a thickness of 30 to 1,200 $\mu\text{m}$ .” These are substantially identical to an element of Element ⑥ that controls the thickness of the support substrate and coating layer, respectively.

(2) As specified in the table shown above, Prior Art 1 discloses a corresponding element that “wherein the coating layer includes a cross linked copolymer, in which a 3- to 6-functional acrylate-based monomer and a caprolactone group-containing multi-functional acrylate-based compound are copolymerized at a weight ratio of 5:5 to 8:2, and an inorganic fine particle dispersed in the cross-linked copolymer.” This is not particularly different from Element ⑥ in that this controls the number of functional groups of the urethane acrylate-based binder contained in the coating layer.

(3) Unlike Element ⑥ of Claim 1, Prior Art 1 does not disclose a technical element that controls the “elastic modulus” of a support substrate and the “weight average molecular weight” of an acrylate-based binder contained in the coating layer.

c) However, it may be deemed that the above difference between Element ⑥ of Claim 1 and a corresponding element of Prior Art 1 could be overcome easily by a skilled person when a corresponding element of Prior Art 2 is combined on the basis of Prior Art 1. The grounds therefore are as follows:

(1) The specification of Prior Art 2 states that “in the present invention, the film base material whose elasticity modulus is 3 to 7GPa, thickness is 38 to 100 $\mu$ m, and light transmittance is 85% or more is used ... For this reason, it is necessary to be at least 100 $\mu$ m or less from a viewpoint that a base film needs to be a thin base material, and lamination with another layer is needed. In this case, when an elasticity modulus is less than 3GPa, when a protective adhesive film is formed, deformation of a film base material will occur easily, and when a protective adhesive film is formed, the fall of surface hardness cannot be suppressed. Moreover, if it is 7GPa or more, a film base material will become too hard and it will become impossible to follow a gently curved surface at the time of sticking of a protective adhesive film” (<14>). As shown in the above disclosures, Prior Art 2 discloses a corresponding element that controls the “elastic modulus” of a support substrate.

(2) The specification of Prior Art 2 states the following: “A protective adhesive film of claim 1, wherein the hard coating layer is composed of cured materials of active energy ray curable resin composition containing a polymer (A), characterized in that, the polymer has (meth)acryloyl group in which (meth)acrylate-based polymer (a1) having a reactive functional group reacting to a side chain reacts with  $\alpha,\beta$ -unsaturated compound (a2) having a functional group that can react with the reactive functional group; and polyfunctional (meth)acrylate (B), characterized in that, the polyfunctional (meth)acrylate has 3 or more (meth)acryloyl groups in 1 molecule” (Claim 4); and “5,000 to 80,000 are preferable, as for the weight average molecular weight of the polymer (A) obtained by the

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manufacturing method and 5,000 to 50,000 are more preferable. 8,000 to 35,000 are further preferable. When the weight average molecular weight is 5,000 or more, the effect of reducing the cure shrinkage is great, and the hardness becomes sufficiently high at 80,000 or less” (<28>). As shown in the above disclosures, Prior Art 2 specifies a corresponding element that controls the “weight average molecular weight” of acrylate-based polymer contained in the coating layer.

d) In light of the following facts, it may not be deemed that the skilled person would experience technical difficulty in combining the above corresponding element of Prior Art 2 based on Prior Art 1.

(1) As seen from the disclosures as to the background art in the specification of Prior Art 1 and the disclosure that “the present invention relates to a plastic film. More particularly, the present invention relates to a plastic film which exhibits high hardness, impact resistance, self-healing property and excellent processability” ([0001]), Prior Art 1 relates to a plastic film to replace a cover plate made of tempered glass. In contrast, as seen from the disclosure of Prior Art 2 that “the present invention relates to a protective adhesive film for protecting a screen panel provided on a surface of a display device such as a liquid crystal panel or an EL display, a screen panel having the protective adhesive film, and a portable electronic terminal having the screen panel” (<1>), Prior Art 2 relates to the “protective adhesive film” formed on a surface of a liquid crystal panel. Thus, its technical field is not completely identical to that of Prior Art 1. However, in light of the disclosure that “the protective adhesive sheet is used as a top surface layer of a visual display device” ([0005]), the protective adhesive film of Prior Art 2 is identical to the plastic film of Prior Art 1 in terms of the position in that the former is used on an outside surface of a display device. Also, the films of prior arts 1 and 2 are substantially identical even in that they include a hard coating layer thereon.

(2) The specification of Prior Art 1 discloses that “in the

plastic film of the present invention ... the supporting substrate may include one or more materials selected from the group consisting of polyethyleneterephthalate, polyethylene, cyclic olefin polymer, cyclic olefin copolymer, polyacrylate, polycarbonate, polyethylene, polymethylmethacrylate, polyetheretherketone, polyethylenenaphthalate, polyetherimide, polyimide, triacetylcellulose, etc.” ([0022]). Also, the specification of Prior Art 2 discloses that “examples of the film substrate used in the present invention include polyethylene terephthalate, polybutylene terephthalate, polyethylene naphthalate, polyethylene film, polypropylene film, cellophane, diacetyl cellulose film, triacetyl cellulose film, acetyl cellulose butyrate film, and polyvinyl chloride film, polyvinylidene chloride film, polyvinyl alcohol film, ethylene-vinyl acetate copolymer film, polystyrene film, polycarbonate film, polymethylpentene film, polysulfone film, polyetheretherketone film, polyethersulfone film, polyetherimide film, polyimide film, fluorine resin film, nylon film, acrylic resin, etc.” (<15>). As shown above, prior arts 1 and 2 are mostly identical even in terms of the types of a compound to be used in the support substrate.

(3) Prior Art 1 relates to “a plastic film, comprising: a support substrate; and a coating layer formed on at least one side of the support substrate, wherein the coating layer includes a cross-linked copolymer, in which a 3- to 6-functional acrylate-based monomer and a caprolactone group-containing multi-functional acrylate-based compound are copolymerized ... and an inorganic fine particle dispersed in the cross-linked copolymer” (Claim 1). Further, Prior Art 2 states that “a protective adhesive film ..., wherein the hard coating layer is composed of cured materials of active energy ray curable resin composition containing a polymer (A), characterized in that, the polymer has (meth)acryloyl group in which (meth)acrylate-based polymer (a1) having a reactive functional group reacting to a side chain reacts with  $\alpha,\beta$ -unsaturated compound (a2) having a functional

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group that can react with the reactive functional group; and polyfunctional (meth)acrylate (B), characterized in that, the polyfunctional (meth)acrylate has 3 or more (meth)acryloyl groups in 1 molecule” (Claims 1 and 4). As shown above, prior arts 1 and 2 include a reactive acrylate-based polymer and a polyfunctional acrylate compound in composition to form a hard coating layer. Also, prior arts 1 and 2 are substantially identical in that their compositions are UV curable.

(4) Moreover, in light of the fact that Prior Art 1 specifies, as its effect, to achieve the “hardness” and the “bending stability” of plastic film at the same time, as to be examined in 6b)(2) shown below, it seems that it would not be technically difficult for Prior Art 1 to adopt, from Prior Art 2, as a solution to the technical problem, a corresponding element that controls the “elastic modulus” of a support substrate and the “weight average molecular weight” of an acrylate-based binder included in a coating layer.

(5) In this respect, the plaintiff argues that, since Prior Art 2 is to achieve the hardness of 3H and it is difficult to attain the properties of film intended by Prior Art 1 by combining with Prior Art 2, it would not be easy for the skilled person to combine prior arts 1 and 2.

However, a corresponding element of Prior Art 2 to be combined only discloses, as examined above, controlling the “elastic modulus” of a support substrate and the “weight average molecular weight” of an acrylate-based binder contained in a coating layer but does not combine a definite numerical scope disclosed in Prior Art 2 with Prior Art 1. The plaintiff’s argument above is that prior arts 1 and 2 are different in the numerical scope of hardness and the properties therefrom would not be an obstacle to determining that it would be easy to combine prior art as shown above. Therefore, the plaintiff’s argument above cannot be accepted.

6) Analysis of Element ③

a) As examined above, Element ③ of Claim 1 limits each numerical value as follows: ① a thickness and an elastic modulus of the support substrate to “20 to 200 $\mu$ m” and “4 to 9GPa measured in accordance with ASTM D882,” respectively; and ② a thickness of the UV curable coating layer, the number of functional groups in the urethane acrylate-based binder contained in the UV curable coating layer, and the weight average molecular weight to “3 to 20 $\mu$ m”, “7- to 20-functional”, and “3,000 to 8,000g/mol”, respectively.

Accordingly, as examined above, Claim 1 including the above numerical limitations of Element ③ would have the following effects identical to the Property Statements: ① to have a pencil hardness of 6H or more at a load of 750g; and ② not to have a crack when, with an interval of 4mm in the middle, allowing the film to stand while both sides are folded at 90 degrees toward the bottom surface at room temperature, and then being unfolded on a flat bottom surface 100,000 times.

b) It may not be deemed that an effect of the Property Statements as stated above occurs within a numerical scope limited in Element ③ and constitutes a different effect contrasted with the prior art. The causes therefore shall be as follows:

(1) The specification of the Subject Invention states the following: “It is an object of the present invention to provide a flexible plastic film having excellent flexibility and bending stability while exhibiting high hardness” ([0007]); “The flexible plastic film according to the present invention exhibits flexibility, bending property, high hardness, scratch resistance and high transparency, and hardly has a risk of damaging the film even in repetitive, continuous bending or long-time folding state. Hence, the flexible plastic film can be usefully applied to bendable, flexible, rollable or foldable mobile devices, display devices, front face and display unit of various instrument panels, etc.” ([0012]); and “The present invention provides

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a plastic resin film including an ultraviolet curable coating layer which is implemented so as to simultaneously satisfy the physical property balance between flexibility and high hardness, and a flexible plastic film which exhibits high hardness and particularly hardly has a risk of damage to the film even by repetitive bending or folding operation, and thus can be applied to a bendable, flexible, rollable, or foldable mobile device, or a display device” ([0024]). As shown by the above disclosures and the Property Statements, Claim 1 has an effect to achieve the “hardness” and the “bending stability (flexibility)” of a plastic film at the same time.

(2) The specification of Prior Art 1 states the following: “The cross-linked copolymer of the caprolactone group-containing multifunctional acrylate-based compound is able to exhibit excellent physical properties such as flexibility, elasticity, impact resistance, durability or the like, and also self-healing capability against an external impact. Hence, the plastic film including the cross-linked copolymer which is prepared by cross-linking polymerization of the caprolactone group-containing multi-functional acrylate-based compound and the tri- to hexafunctional acrylate-based monomer secures mechanical properties such as high scratch resistance, high hardness, wear resistance or the like, and also high elasticity or elastic recovery, and achieves excellent self-healing capability against scratch or external damage, with minimal curling or cracking occurrence” ([0031]); “Further, the plastic film of the present invention may have a pencil hardness of 6H or more, 7H or more, or 8H or more under a load of 1kg” ([0095]); “Further, when the plastic film of the present invention is disposed on a plane after being exposed to a temperature of 50°C or higher at a humidity of 80% or higher for 70 Hours, the maximum distance at which each edge or side of the plastic film is spaced apart from the plane may be approximately 1.0mm or less, approximately 0.6mm or less, or approximately 0.3mm or less. In particular, when the plastic film is disposed on a plane after exposure

to a temperature of 50°C to 90°C at a humidity of 80% to 90% for 70 to 100 hours, each edge or side of the plastic film is spaced apart from the plane by approximately 1.0mm or less, approximately 0.6mm or less, or approximately 0.3mm or less, maximally” ([0099]); and “Cylindrical bending test: Each of the plastic films was wound on a cylindrical mandrel having a diameter of 3cm, and cracking occurrence was examined. When the plastic film was not cracked, it was evaluated as OK. If the plastic film was cracked, it was evaluated as X” ([0152], [0153], [0157]).

It is difficult to find an explicit expression as to the “bending stability” in the specification of Prior Art 1. However, the flexibility that may be viewed as an effect sought in Prior Art 1 is a concept including the “bending stability” and a prerequisite for the “elasticity” and the final “bending stability.” Thus, Prior Art 1 is different from the Property Statements in terms of the conditions for the bending test, such as measuring the load of the pencil hardness, the diameter of cylindrical mandrel, etc.<sup>5)</sup> However, Prior Art 1 is not different from Claim 1 in that they have an effect to achieve the “hardness” and “bending stability” of plastic film at the same time.

(3) On the other hand, the specification of Prior Art 2 states that “the problem to be solved by the present invention is to provide a protective adhesive film that can be laminated by a glass plate or the like through an adhesive layer to maintain a high surface hardness even when a thin panel is formed, and that foaming is unlikely to occur even at a high temperature and high humidity environment and provide a screen panel that combines thin, moderate elasticity and high surface hardness and is excellent in visibility, and provide a portable electronic terminal that is hard to scratch on the surface of the panel and is excellent in visibility” (<8>). As shown in

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5) In Prior Art 1, a measuring load of the pencil hardness is “1kg” and a diameter of a mandrel in the bending test is “3cm.” In contrast, in the Subject Invention, these are “750kg” and “4mm”, respectively.

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the above disclosures, Prior Art 2 seeks the high “hardness” of plastic film.

(4) To be specific, it is a general problem in the relevant technical field to achieve the “hardness” and “bending stability” of a plastic film used in display products. Thus, it is difficult to view that it corresponds to a different effect to achieve them at the same time. Even the plaintiff does not argue the fact that it may not be viewed as a different effect of the Subject Invention to achieve the hardness and bending stability “at the same time.”<sup>6)</sup>

c) Also, it is difficult to deem that an effect of the Property Statements shown above is a significant effect around the limited numerical scope of Element ©. The grounds therefore are as follows:

(1) The specification of the Subject Invention discloses to the effect that it is possible to control the following within numerical scopes disclosed in the Property Statements for the hardness and bending stability of plastic film: thickness and elastic modulus of support substrate; thickness of coating layer; the number of functional groups, weight average molecular weight, etc., of acrylate-based binder contained therein, etc.

(a) As to the thickness of a support substrate and coating layer, the following are stated: “The coating layer may have a thickness of about 3 $\mu$ m or more, for example about 3 to about 20 $\mu$ m, or about 3 to about 15 $\mu$ m, or about 3 to about 10 $\mu$ m after being completely cured. According to the present invention, it is possible to provide a flexible plastic film having a high hardness when a coating layer having such a thickness is included” ([0080]); “Also, the thickness of the support substrate may be about 20 $\mu$ m or more, or about 25 $\mu$ m or more, or about 30 $\mu$ m or more, and the upper limit value thereof may be about 200 $\mu$ m or less, or about 150 $\mu$ m or less, or about 100 or less, or about 60 $\mu$ m or less. If the thickness of the

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6) See the second protocol of pleadings.

support substrate is less than 20 $\mu$ m, there is a possibility that breakage or curling occurs in the process of forming the coating layer, and it may be difficult to achieve high hardness. On the other hand, if the thickness exceeds 200 $\mu$ m, the flexibility deteriorates and it may be difficult to form a flexible film” ([0037]); and “Further, according to one embodiment of the present invention, the thickness ratio between the support substrate and the coating layer may be about 1:0.05 to about 1:1, or about 1:0.1 to about 1:0.8. When the thickness ratio between the support substrate and the coating layer is within the above range, a flexible plastic film exhibiting high hardness and flexibility can be more easily formed.” ([0041])

(b) As to the elastic modulus of a support substrate, the following are disclosed: “Among the conditions of the support substrate, the elastic modulus may be about 4GPa or more, or about 5GPa or more, or about 5.5GPa, or about 6GPa or more, and the upper limit value thereof may be about 9GPa or less, or about 8GPa or less, or about 7GPa or less. If the elastic modulus is less than 4GPa, sufficient hardness cannot be achieved, and if the elastic modulus exceeds 9GPa which is too high, it may be difficult to form a film having flexibility” ([0036]); and “in view of ensuring the processability for the flexible film and achieving the physical property balance between the high hardness and the flexibility, a support substrate having an elastic modulus of 4GPa or more and 9GPa or less ... can be used in a plastic film of the present invention” ([0038]).

(c) As to the number of functional groups and weight average molecular weight of acrylate-based binder contained in the coating layer, the following are disclosed: “The 7- to 20-functional urethane acrylate-based binder is cross-linked with the 3- to 6-functional acrylate-based binder to form a copolymer, and may impart a high hardness, flexibility and impact resistance to the coating layer formed after curing. The 7- to 20-functional urethane acrylate-based binder may be used alone or in the combination of different types” ([0051]); “According to one embodiment of the

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present invention, the 7- to 20-functional urethane acrylate-based binder has a weight average molecular weight ranging from about 2,000 to about 8,000g/mol, or from about 3,000 to about 6,000g/mol, or from about 3,000 to about 5,000g/mol which may be preferable for the optimization of the physical properties of the coating layer” ([0053]); “Meanwhile, the 7- to 20-functional urethane acrylate-based binder contained in the coating layer of one embodiment in the present invention includes at least 7 polyfunctional acrylate groups and at the same time has a urethane bond in the molecule, and thus, is excellent in elasticity and flexibility. Accordingly, when it is cross-linked with a 3- to 6-functional acrylate-based binder at an appropriate weight ratio to form a copolymer, it serves to impart sufficient flexibility together with high hardness to the coating layer. The 7- to 20-functional urethane acrylate-based binder may contain 2 to 20 urethane bonds in one molecule” ([0057]); and “As such, the coating layer according to one embodiment of the present invention includes a cross-linked copolymer in which the 3- to 6-functional acrylate-based binder and the 7- to 20-functional urethane acrylate-based binder are cross-linked to each other, thereby imparting high hardness and flexibility to the flexible plastic film. In particular, it has high stability against bending, rolling or folding, and thus it is possible to secure excellent flexibility and stability, which hardly has a risk of damaging the film even when repeatedly warped or folded for a long time” ([0058]).

(2) However, it may be difficult to deem that a substantial effect occurs around the numerical scope limited in Element © as the Property Statements, in light of the following disclosures: “If the thickness of the support substrate is less than 20 $\mu$ m, ... it may be difficult to achieve high hardness. On the other hand, if the thickness exceeds 200 $\mu$ m, the flexibility deteriorates and it may be difficult to form a flexible film”; or “If the elastic modulus is less than 4GPa, sufficient hardness cannot be achieved, and if the elastic modulus exceeds 9GPa which is too high, it may be difficult to form a film having flexibility.” The specification of the Subject Invention contains

no other disclosure with a critical significance that a significant effect occurs around the numerical scope limited as shown above.

(3) Rather, the specification of the Subject Invention shows the results of the test to the effect that there is no effect of the Property Statements even within the numerical scope limited in Element ©.

(a) The specification of the Subject Invention specifies the following:

**[0096] Embodiment 1**

[0097] 30g of trimethylolpropane triacrylate (TMPTA) as a trifunctional acrylate-based binder, 40g of MU9800 as a 9-functional urethane acrylate-based binder, 30g of MU9020 as a 10-functional urethane acrylate-based binder, 1g of Irgacure 184 as a photoinitiator, and 15g of methyl ethyl ketone (MEK) were mixed to prepare an acrylate solution.

[0098] 60g of a solution in which a silica particle S1 ( $d_{10}=17\text{nm}$ ,  $d_{50}=22\text{nm}$ ,  $d_{90}=28\text{nm}$ , surface-modified with methacrylate silane coupling agent) was dispersed in n-BA 3 (normal butyl acetate) in an amount of 50% by weight (hereinafter, referred to as S1 dispersion solution), and 50g of a solution in which a silica particle S2 ( $d_{10}=29\text{nm}$ ,  $d_{50}=51\text{nm}$ ,  $d_{90}=74\text{nm}$ , surface-modified with an acrylate silane coupling agent) was dispersed in MEK in an amount of 30% by weight (hereinafter, referred to as S2 dispersion solution) were mixed with the resulting acrylate solution to prepare a coating composition.

[0099] The coating composition was coated onto both surfaces of a polyimide substrate (size: 20cm×30cm, thickness: 35 $\mu\text{m}$ ) having an elastic modulus value of 6.0GPa as measured according to ASTM D882 by a bar coating method, and photo-cured with a metal halide lamp having a wavelength of 290 to 320nm to form a coating layer.

[0100] After the curing was completed, the thickness of the coating layer formed on both surfaces was 6 $\mu\text{m}$ , respectively.

**[0138] Embodiment 2**

[0139] The coating layer was formed in the same manner as in Embodiment 1, except that a solution in which silica particle S4 ( $d_{10}=12\text{nm}$ ,  $d_{50}=17\text{nm}$ ,  $d_{90}=21\text{nm}$ , surface-modified with an acrylate silane coupling agent) was dispersed 40 weight% in MEK was used in an amount of 112.5g of and no additional methyl ethyl ketone solvent was

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contained other than 12g.

[0141] **Embodiment 3**

[0142] The coating layer was formed in the same manner as in Embodiment 1, except that 35g of methyl ethyl ketone was used, and 110g of a solution in which a silica particle S1 dispersion solution.

[0144] **Embodiment 4**

[0145] The coating layer was formed in the same manner as in Embodiment 1, except that, in Embodiment 1, 125g of the S3 dispersion solution and 25g of S4 dispersion solution were used and no methyl ethyl ketone solvent was contained additionally.

[0183]

*Table 3*

	Embodiment 1	Embodiment 2	Embodiment 3	Embodiment 4	Embodiment 5	Embodiment 6	Embodiment 7
Pencil hardness	7H	8H	7H	8H	6H	7H	6H
Haze	0.4%	0.3%	0.4%	0.4%	0.4%	0.3%	0.4%
Transmittance	91.9%	91.8%	92.0%	91.9%	91.9%	92.1%	91.7%
Bending test	4mm	4mm	4mm	4mm	3mm	4mm	3mm
Bending stability	100,000 times OK						
Recovery	OK						

[0184]

*Table 4*

	Comparative example 1	Comparative example 2	Comparative example 3	Comparative example 4	Comparative example 5	Comparative example 6	Comparative example 7
Pencil hardness	4H	5H	8H	5H	4H	6H	8H
Haze	0.2%	0.3%	0.4%	0.4%	0.3%	0.5%	0.3%
Transmittance	92.1%	91.9%	91.8%	91.8%	92.1%	92.0%	92.0%
Bending test	3mm	4mm	5mm	4mm	3mm	20mm	8mm
Bending stability	100,000 times OK	100,000 times OK	NG (10,000 times)	100,000 times OK	100,000 times OK	NG (10,000 times)	NG (10,000 times)
Recovery	OK	OK	NG	OK	OK	NG	NG

(b) According to the above disclosures, it can be understood that Embodiment 1 falls within the numerical scope limited in Element ③ and has an effect as specified in the Property Statements, such as “pencil hardness of 7H” and “bending stability OK.” On the other hand, Comparative Examples 2, 3, and 4 fall within the numerical scope limited in Element ③ as Embodiment 1 does but do not show an effect as specified in the Property Statements with the results of a test, such as “pencil hardness of 5H” or “bending stability NG.”

d) As shown above, an effect of the Property Statements, which occurs around the numerical scope limited in Element ③, does not correspond to a different or significant effect compared to the prior art. Thus, it may be deemed that the numerical limitation in Element ③ is merely a simple numerical limitation that the skilled person could properly select through ordinary and repeated tests. In light of the circumstances, the plaintiff’s argument that it would be difficult for the skilled person to conceive the definite numerical scope in Element ③ for the thickness of a coating layer, the elastic modulus of a support substrate, and the acrylate-based binder contained in the coating layer, which are the technical elements for “bending stability” of Claim 1, cannot be accepted.

e) In this respect, the plaintiff argues to the effect that the numerical limitation for elastic modulus in Element ③ has no special technical significance in light of the following facts: According to Embodiment 5 and Comparative Example 5 in the specification of the Subject Invention, the elastic modulus of a substrate film is 4.2GPa and 3.1GPa in Embodiment 5 and Comparative Example 5, respectively. Also, the hardness of a final film is 6H and 4H in Embodiment 5 and Comparative Example 5, respectively; and, as examined above, the specification discloses that “if the elastic modulus is less than 4GPa, sufficient hardness cannot be achieved, and if the elastic modulus exceeds 9GPa which is too high, it may be difficult to

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form a film having flexibility.”

However, the specification of the Subject Invention only discloses that the hardness and flexibility could not be sufficient around 4GPa and 9GPa, which are the upper and lower limits of a numerical scope for the elastic modulus of Element ©, but does not otherwise state the critical significance around the numerical scope. Thus, it is difficult to deem, only with the above test examples cited by the plaintiff, that the numerical scope of the elastic modulus in Element © is technically significant. Thus, the plaintiff’s arguments above shall not be accepted.

f) Also, the plaintiff argues to the effect that the numerical scope for the number of functional groups in Element © has a special technical significance in light of the following facts: the embodiments in the specification of the Subject Invention include a 7- to 20-functional urethane acrylate oligomer with molecular weight of 3,000 to 8,000g/mol, as a binder; however, Comparative Example 7 uses only a 6-functional urethane acrylate oligomer with molecular weight of 5,400g/mol; and in Comparative Example 7, a crack of 3mm or longer occurred when it is bent once with a bending diameter of 8mm and a crack of 1cm or longer occurred when it is bent 100,000 times with a bending diameter of 4mm.

However, it is difficult to acknowledge the critical significance in the case of 7 functional groups only by comparing embodiments and Comparative Example 7. Further, the specification of the Subject Invention does not disclose, with embodiments, the critical significance around the numerical range of 20 functional groups. Furthermore, in light of the fact that it constitutes common knowledge in the technological field self-evident to a skilled person when the application for the Subject Invention was filed that the physical properties of a coating layer, such as flexibility, hardness, etc., could differ depending on a degree of functionalization of acrylate compound<sup>7)</sup>, it shall be deemed that a numerical scope of the number of functional groups in

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7) In this respect, the Parties do not argue (see the first protocol of pleadings).

Element © is merely a simple numerical limitation that could be properly selected by the skilled person through ordinary and repeated tests. Thus, the plaintiff's arguments shown above shall not be accepted, either.

g) The plaintiff argues to the effect that the skilled person would not be able to easily select, in Element ©, a urethane acrylate-based binder whose weight average molecular weight is 3,000 to 8,000g/mol and functional groups are 7 to 20 in light of the following facts: the structure of oligomer itself changes depending on not only the basic structure (main chain – functional group) like urethane acrylate but also the “number of functional groups” or “molecular weight” thereof; even the structure of urethane acrylate with the same molecular weight of 5,000 differs between 2 and 10 functional groups by 5 times in terms of an acrylate unit combined at an end; if a molecular weight changes, a chain structure and a 3D structure or a crosslink structure expressed therefrom also change; and thus, it shall not be considered separately from the structure, functional groups, and molecular weight of the substance.

However, as long as the urethane acrylate-based binder is a substance that is widely known and thus could be easily selected in the technical field of the Subject Invention and, as examined above, the specification of the Subject Invention does not disclose the special technical significance of the number of functional groups or the molecular weight around the numerical scope, it is difficult to deem that the element which combines the numerical scope for the weight average molecular weight and the number of functional groups in a urethane acrylate-based binder in Element © would have the technical significance exceeding what the skilled person optimizes through repeated tests. Hence, the plaintiff's arguments shown above shall not be accepted, either.

## 7) Discussion of the Plaintiff's Argument for Property Statements

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a) As to the Property Statements, the plaintiff argues as follows:

(1) It is excluded from the technical scope of Claim 1 not to achieve an effect as specified by the Property Statements notwithstanding the fact that it is equipped with Elements (a), (b), and (c).

(2) Thus, Claim 1 has a different effect compared to prior arts 1 and 2 in that its “bending stability” to be achieved simultaneously with hardness is that, as specified in the Property Statements, with an interval of 4mm in the middle, allowing the film to stand while both sides are folded at 90 degrees toward the bottom surface at room temperature, and then being unfolded on a flat bottom surface 100,000 times, a crack would not occur.

(3) Also, Claim 1 has a significant effect compared to the above prior art in that the “bending stability” is achieved as stated above.

b) Claim 1 is different from Prior Art 2, which is to be applied to flat display products, or Prior Art 1, which is to be applied to curved display products, in that Claim 1 provides a flexible plastic film that can be applied to foldable display products. Thus, it seems that the plaintiff’s argument above is that the bending stability of Claim 1 has a different or significant effect other than the above prior art with physical properties, such as flat or curved type, etc.

c) However, the plaintiff’s argument above cannot be accepted on the following grounds:

(1) First, the ground for the plaintiff’s argument that the fact that Claim 1 fails to achieve an effect like the Property Statements even with Elements (a), (b), and (c) shall be excluded from the technical scope of Claim 1 means that there might be technical elements, in addition to Elements (a), (b), and (c), which could derive an effect like the Property Statements. However, as examined above and acknowledged by the plaintiff itself, the details of the technical

element in the disclosures that “... exhibits pencil hardness of 6H or more at a load of 750g. With an interval of 4mm in the middle, allowing the film to stand while both sides being folded at 90 degrees toward the bottom surface at room temperature, and then being unfolded on a flat bottom surface 100,000 times, a crack ... would not occur” are not identical to Elements 3, 4, and 5 included in Elements (a), (b), and (c).

The plaintiff does not argue whether a technical element is required additionally to achieve an effect like the Property Statements in Claim 1 or what kinds of a technical element is required, if any. The plaintiff only argues to the effect that since claims of Claim 1 disclose the physical properties, such as the Property Statements, which are different from the prior art, the critical significance of a numerical scope in Element (c) shall not be required strictly. As the plaintiff points out, when the high hardness and the bending stability of plastic film trade off with each other, a more definite technical element shall be provided to achieve the high hardness and the bending stability at the same time to a level of the Property Statements. The technical elements disclosed in the specification of the Subject Invention are composed of the following: Elements (a) and (b) as to the basic structure and composition of the film; and Element (c) whose critical significance is not acknowledged as a relatively wide numerical scope.

If it is deemed that all films having a definite limiting element which could achieve an effect like the Property Statements in addition to Elements (a), (b), and (c) fall within the scope of rights in Claim 1 only on the ground that the films have Elements (a), (b), and (c), which do not exhibit a different or significant effect as examined above, the technical element or scope of the right in Claim 1 would be extended irrationally exceeding what is disclosed in the specification of the Subject Invention, unless there are special circumstances.

(2) Even if a curved film is different from a foldable film in that they are applied to commercially different products, they are

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technically identical in terms of development direction, the so-called flexible display. Further, it is difficult to evaluate that their physical properties derived therefrom are different. Thus, in the disclosure that “with an interval of 4mm in the middle, allowing the film to stand while both sides being folded at 90 degrees toward the bottom surface at room temperature, and then being unfolded on a flat bottom surface 100,000 times, a crack ... would not occur,” it seems that the numerical values, such as “100,000 times,” etc., relate to a degree to which the bending stability is achieved. Also, it is difficult to deem that the numerical values exhibit a different effect.

(3) As examined above, since the numerical limitation of Element ③ is merely a simple numerical limitation to a degree which could be properly selected by the skilled person through ordinary and repeated tests, it may not be deemed that an effect of the Property Statements corresponds to a significant effect occurred around the numerical scope limited in Element ③. Otherwise, as long as another technical element with critical significance is not found which could be viewed as deriving an effect like the Property Statements, it may not be deemed, unlike the plaintiff’s arguments, that Claim 1 has a significant effect compared to the prior art only in that Claim 1 derives the bending stability as specified in the Property Statements.

### 8) Summary of analysis

In summary, Element ③ is merely a simple numerical limitation, and a skilled person could easily conceive all technical elements, such as Elements ①, ②, ③, etc., in Claim 1 by combining Prior Art 2 with Prior Art 1. Thus, it may not be deemed that Claim 1 is difficult in terms of its elements compared to prior arts 1 and 2. As long as the technical elements of Claim 1 could be easily conceived from prior arts 1 and 2, it may not be deemed that Claim 1 has a significant effect compared to prior arts 1 and 2. Hence, Claim 1 could be easily invented from prior arts 1 and 2 by a skilled person, and its inventive

step is denied.

#### **D. Whether the Inventive Step of Claim 5 Is Denied**

##### 1) Limiting Element of Claim 5

Claim 5 is a dependent claim of Claim 1 and includes a limiting element to the effect that the UV curable coating layer comprises “a cross-linked copolymer of a 3- to 6-functional acrylate-based binder and a 7- to 20-functional urethane acrylate-based binder; and inorganic fine particles having a bi-modal particle size distribution including a first inorganic fine particle group having  $d_{50}$  of 20 to 35nm and a second inorganic fine particle group having  $d_{50}$  of 40 to 130nm.”

##### 2) Comparison with Prior Art 1

The specification of Prior Art 1 discloses the following as corresponding elements: “A plastic film, comprising: a support substrate; and a coating layer formed on at least one side of the support substrate, wherein the coating layer includes a cross-linked copolymer, in which a 3- to 6-functional acrylate-based monomer and a caprolactone group-containing multi-functional acrylate-based compound are copolymerized at a weight ratio of 5:5 to 8:2, and an inorganic fine particle dispersed in the cross-linked copolymer” (Claim 1); and “the inorganic fine particles may be an inorganic fine particle having a diameter in the nanoscale. For example, they may have a diameter of approximately 100nm or less, or approximately 10 to 100nm, or approximately 10 to 50nm” ([0050]).

##### 3) Difference with Prior Art 1

The limiting element of Claim 5 shown above is substantially identical to a corresponding element of Prior Art 1 in that they include a copolymer containing 3- to 6-functional acrylate-based binder and an inorganic fine particle.

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However, the corresponding element of Prior Art 1 is different from the limiting element of Claim 5 in that ① the former has a polyfunctional acrylate-based compound but does not disclose the “7- to 20-functional urethane acrylate-based binder” (hereinafter, “Difference 1”); and ② the former does not disclose a technical element that an inorganic fine particle has “a bi-modal particle distribution including a first inorganic fine particle group with  $d_{50}$  of 20 to 35nm and a second inorganic fine particle group with  $d_{50}$  of 40 to 130nm” (hereinafter, “Difference 2”).

### 4) Analysis of Difference 1 (7- to 20-functional urethane acrylate-based binder)

a) As examined above in the analysis of an inventive step of Claim 1, the “7- to 20-functional urethane acrylate-based binder” is merely an element that a skilled person could easily conceive from Prior Art 1. Since Prior Art 1 discloses an element in which a polyfunctional acrylate-based compound is copolymerized, a skilled person could easily conceive, from Prior Art 1, a cross-linked copolymer with 3- to 6-functional acrylate-based binder and 7- to 20-functional urethane acrylate-based binder in Claim 5.

b) Thus, Difference 1 could be easily overcome from Prior Art 1 by the skilled person.

### 5) Analysis of Difference 2 (particle distribution of inorganic fine particles)

a) As to the “particle distribution of inorganic fine particles”, the specification of the Subject Invention discloses the following:

[0059] The coating layer according to one embodiment of the present invention comprises inorganic fine particles having a bi-modal particle size distribution including a first inorganic fine particle group having  $d_{50}$  of 20 to 35nm and a second inorganic fine particle group having  $d_{50}$  of

40 to 130nm. As described above, the coating layer of the present invention uses the inorganic fine particles exhibiting a bi-modal particle size distribution including the first and second inorganic fine particle groups each having a specific range of  $d_{50}$ , thereby improving the hardness and flexibility of the coating layer simultaneously while maintaining the flexible property.

[0060] In the specification of the present invention, when a cumulative particle size distribution corresponding to particle sizes was measured using a laser light diffraction method (measurement method: size distribution by number is determined by using dynamic laser scattering, a solvent in which inorganic fine particles are dispersed, refractive index, viscosity, and dielectric constant of the inorganic fine particles, the equipment name: Malvern Zetasizer Nano-ZS 90), the particle size at the 10% cumulative is set  $d_{10}$ , the particle size at the 50% cumulative to  $d_{50}$ , and the particle size at the 90% cumulative to  $d_{90}$ . The particle size distribution by the laser light diffraction method can show substantially the same distribution as that measured with SEM or TEM by diluting a dispersion liquid in which inorganic fine particles are dispersed in a solvent, or measured by analyzing the cross section of the coating layer containing the inorganic fine particles by SEM or TEM.

[0061] The first inorganic fine particle group having the small particle size range contributes to the improvement of the hardness, and the second inorganic fine particle group having the larger particle size range contributes to the improvement of bending property and flexibility. In this way, as other inorganic fine particle groups having different particle size ranges are mixed and used in addition to the cross-linked copolymer described above, it is possible to provide a coating layer in which the physical properties of hardness and flexibility are improved simultaneously.

[0068] According to one embodiment of the present invention, the first and second inorganic fine particle groups may be the same or different and each independently surface-modified with any one or more silane coupling agents selected from the group consisting of (meth)arylsilane, methacryloxysilane, vinylsilane, epoxysilane, and mercaptosilane.

According to the above disclosures, the “particle distribution of inorganic fine particles” among the above limiting element of Claim 5

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is to maintain the flexible property and achieve the high hardness and flexibility of a coating layer at the same time. Specifically, a first inorganic fine particle group contributes to the improvement of hardness and a second inorganic fine particle group improves the bending property and flexibility. Also, the particle distribution of inorganic fine particles is controlled to achieve the problems above simultaneously.

b) Accordingly, the specification of Prior Art 4 discloses the following: “A hard coating film, comprising: an ultraviolet curable resin; a photoinitiator; a hard coating layer containing an inorganic nano particle with average particle size ( $D_{50}$ ) of 5 to 15nm; an inorganic nano particle with average particle size ( $D_{50}$ ) of 16 to 30nm; and an inorganic nano particle with average particle size ( $D_{50}$ ) of 31 to 100nm, wherein pencil hardness is 3H or more, wherein 3 to 50% of the inorganic nano particles with the average particle size ( $D_{50}$ ) of 5 to 15nm, the inorganic nano particles with the average particle size ( $D_{50}$ ) of 16 to 30nm, and the inorganic nano particles with the average particle size ( $D_{50}$ ) of 31 to 100nm are surfaces treated with (meth)acrylate, wherein a weight ratio of the inorganic size ( $D_{50}$ ) is 1:1 to 1.5:1.5 to 5” (Claim 3); “When two or more kinds of inorganic nano particles are used in the hard coat layer of the present invention, two or more kinds selected from inorganic nano particles having an average particle diameter ( $D_{50}$ ) of 5-15nm, 16-30nm and 30-100nm can be used” [0021]; and “Inorganic nano particles having an average particle diameter ( $D_{50}$ ) of 5-15nm, inorganic nano particles having an average particle diameter ( $D_{50}$ ) of 16-30nm, and inorganic nano particles having an average particle diameter ( $D_{50}$ ) can be used. Inorganic nano particles having an average particle diameter ( $D_{50}$ ) of 5 to 15nm, inorganic nano particles having an average particle diameter ( $D_{50}$ ) of 16 to 30nm, and inorganic nano particles having an average particle diameter ( $D_{50}$ ) of 30 to 100nm can have a weight ratio of 1:1 to 4:1 to 7. Within this range, the pencil hardness can be increased

without increasing the thickness of the hard coat layer, and there is no curling” ([0024]).

c) As shown in the above disclosures, Prior Art 4 discloses a corresponding element with the following disclosures: “A hard coating layer containing an inorganic nano particle with average particle size ( $D_{50}$ ) of 5 to 15nm; an inorganic nano particle with average particle size ( $D_{50}$ ) of 16 to 30nm; and an inorganic nano particle with average particle size ( $D_{50}$ ) of 31 to 100nm”; and “Inorganic nano particles having an average particle diameter ( $D_{50}$ ) of 5 to 15nm, inorganic nano particles having an average particle diameter ( $D_{50}$ ) of 16 to 30nm, and inorganic nano particles having an average particle diameter ( $D_{50}$ ) of 30 to 100nm can have a weight ratio of 1:1 to 4:1 to 7.” Therefore, a skilled person would be able to easily conceive, from the above corresponding element of Prior Art 4, a corresponding element that “a bi-modal of fine particles with different average particle size distribution can be used.”

d) It may be deemed that Difference 2 caused by the above element part would be able to be overcome easily when the skilled person combines the above corresponding element of Prior Art 4 with Prior Art 1, in light of the following facts: an effect that simultaneously achieves the hardness and the bending stability (flexibility) of a coating layer, which is an effect to be derived by an element for the “particle distribution of inorganic fine particles” among the above limiting elements of Claim 5, may not be evaluated as a different effect compared to the prior art as examined above; and the specification of the Subject Invention contains no data to deem that a significant effect is generated around the limited numerical scope by an element for the “particle distribution of inorganic fine particles.”

e) Also, Prior Art 4 relates to a hard coating film and has the same technical field as Prior Art 1 as to a plastic film to replace a cover plate made of tempered glass. Further, as examined above, Prior Art 1 intends, as an effect of the invention, to achieve the “hardness”

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and the “bending stability” of plastic film at the same time. Also, the above corresponding element of Prior Art 4 is that “the pencil hardness can be increased without increasing the thickness of the hard coat layer, and there is no curling” and seeks the same effect. Accordingly, it may not be deemed that the skilled person would experience particular technical difficulty in applying Prior Art 1 to a corresponding element of Prior Art 4 to provide a solution to a technical problem to achieve the above effect.

### 6) Summary of analysis

In summary, it may be deemed that the skilled person would be able to easily conceive the technical elements of Claim 5 by combining prior arts 2 and 4 with Prior Art 1. Also, it may be said that the elements of Claim 5 are difficult compared to the above prior art, and the effect of Claim 5 is self-evident since it falls within a scope predicted from the combination of the above prior arts. Hence, as a skilled person could easily invent Claim 5 from prior arts 1, 2, and 4, its inventive step is denied.

### **E. Whether the Inventive Step of the Inventions of Claims 6 and 7 Is Denied**

(1) This Claim 6 is a dependent claim of Claim 5 and further limits a weight ratio of 3- to 6-functional acrylate-based binder to 7- to 20-functional urethane acrylate-based binder. Further, Claim 7 is a dependent claim of Claim 5 and further limits, with numerical values, a weight ratio of each binder to each inorganic fine particle group.

(2) As examined above, an effect that achieves the hardness and the bending stability of a coating layer at the same time may not be viewed as a different effect compared to the prior arts. Further, unless data are found in the specification of the Subject Invention to be deemed that there is a significant effect around the numerical scope

limited in the Inventions of Claims 6 and 7, such numerical scope would be only a simple numerical limitation that the skilled person could properly select through ordinary and repeated tests.

(3) Thus, the Inventions of Claims 6 and 7 would be able to be easily invented from prior arts 1, 2, and 4 by the skilled person, as Claim 5. Hence, its inventive step is denied.

#### **F. Whether the Inventive Step of Claim 8 is Denied**

(1) Claim 8 is a dependent claim of Claim 5 and has a limiting element that the first and second inorganic fine particle groups “may be the same or different and each independently surface-modified with any one or more silane coupling agents selected from the group consisting of (meth)arylsilane, methacryloxysilane, vinylsilane, epoxysilane, and mercaptosilane.”

(2) Accordingly, the specification of Prior Art 4 discloses that “the inorganic nano particle surface treatment agent may be at least one selected from the group consisting of a vinyl-based, epoxy-based, methacryloxy-based, amino-based silane coupling agent, etc. It is a common practice to surface-treat inorganic nano particles with a (meth)acryloxy-based silane coupling agent for chemical bonding with an acrylate resin” ([0029]). As shown in the above disclosure, Prior Art 4 discloses a corresponding element that an inorganic fine particle group is surface treated with a methacryloxy-based saline coupling agent. Since the above corresponding element of Prior Art 4 corresponds to one of the technical elements that are selectively disclosed by a limiting element of Claim 8, the difficulty of an element or the significance of an effect in Claim 8 cannot be acknowledged.

(3) Thus, Claim 8 could be easily invented from prior arts 1, 2, and 4 by the skilled person, as Claim 5. Therefore, its inventive step

is denied.

### **G. Whether the Inventive Step of Claim 9 Is Denied**

(1) Claim 9 is a dependent claim of Claim 5 and limits an average particle size of the first organic fine particle group to “ $d_{10}$  of 10 to 19nm and  $d_{90}$  of 25 to 40nm” and an average particle size of the second inorganic fine particle group to “ $d_{10}$  of 25 to 110nm and  $d_{90}$  of 60 to 150nm”.

(2) The specification of Prior Art 1 discloses the following: “the inorganic fine particles may be an inorganic fine particle having a diameter in the nano scale. For example, they may have a diameter of approximately 100nm or less, or approximately 10 to 100nm, or approximately 10 to 50nm” ([0050]); and “a hard coating layer containing an inorganic nano particle with average particle size ( $D_{50}$ ) of 5 to 15nm; an inorganic nano particle with average particle size ( $D_{50}$ ) of 16 to 30nm; and an inorganic nano particle with average particle size ( $D_{50}$ ) of 31 to 100nm” (Claim 3). Likewise, Prior Art 1 discloses various particle sizes of an inorganic fine particle group, as a corresponding element and Prior Art 4 discloses a numerical scope for various average particle sizes of an inorganic fine particle group. As explained above, prior arts 1 and 4 disclose corresponding elements that an average particle size of inorganic fine particle groups is controlled.

However, the specification of the Subject Invention does not disclose any content from which it could be deemed that a specific numerical scope of the above limiting element in Claim 9 has a critical significance. Thus, the above numerical scope would be merely a simple numerical limitation that the skilled person would be able to properly select through ordinary and repeated tests.

(3) Thus, Claim 9 could be easily invented from prior arts 1, 2, and 4 by the skilled person, as in Claim 5. Therefore, its inventive

step is denied.

#### **H. Whether the Inventive Step of Claim 10 Is Denied**

(1) Claim 10 is a dependent claim of Claim 5 and further limits the weight ratio of the first and the second inorganic fine particle groups to “9:1 to 3:7.”

(2) The specification of Prior Art 4 discloses “a hard coating film, ... wherein a weight ratio of an inorganic nano particle with average particle size ( $D_{50}$ ) of 5 to 15nm; an inorganic nano particle with average particle size ( $D_{50}$ ) of 16 to 30nm; and an inorganic nano particle with average particle size ( $D_{50}$ ) of 31 to 100nm is 1:1 to 1.5:1.5 to 5” (Claim 3). Likewise, Prior Art 4 discloses a corresponding element that controls the weight ratio of the inorganic fine particle groups.

However, the specification of the Subject Invention does not disclose any content from which it could be deemed that a specific numerical scope of the above limiting element in Claim 10 has a critical significance. Thus, the above numerical scope would be merely a simple numerical limitation that the skilled person would be able to properly select through ordinary and repeated tests.

(3) Thus, Claim 10 could be easily invented from prior arts 1, 2, and 4 by the skilled person, as in Claim 5. Therefore, its inventive step is denied.

#### **I. Whether the Inventive Step of Claim 11 Is Denied**

(1) Claim 11 is a dependent claim of Claim 1 and limits that “one or more support substrates are selected from the group consisting of polyimide, polyimideamide, polyetherimide, polyethyleneterephthalate, polyethylenenaphthalate, polyetheretherketone, cyclic olefin polymer, polyacrylate, polymethylmethacrylate, and triacetylcellulose.”

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(2) Prior Art 1 discloses a corresponding element that “the plastic film, the supporting substrate may include one or more materials selected from the group consisting of polyethyleneterephthalate, polyethylene, cyclic olefin polymer, cyclic olefin copolymer, polyacrylate, polycarbonate, polyethylene, polymethylmethacrylate, polyetheretherketone, polyethylenenaphthalate, polyetherimide, polyimide, triacetylcellulose, and fluoro-based resin” (Claim 17). The above corresponding element of Prior Art 1 is substantially identical to the above limiting element of Claim 11.

(3) Thus, Claim 11 could be easily invented from prior arts 1 and 2 by a skilled person, as in Claim 1. Therefore, its inventive step is denied.

### **J. Whether the Inventive Step of Claim 12 Is Denied**

(1) Claim 12 is a dependent claim of Claim 1 and has an additional element “further comprising an antistatic layer or a low refractive index layer on the upper surface or the lower surface of the ultraviolet curable coating layer.”

(2) The specification of Prior Art 5 discloses the following: “An anti-reflection film ... wherein the anti-reflection film contains a hard coating layer and a low refractive index layer is laminated on the hard coating layer directly or via another layer.” (Claims 1, 15); and “The electro-conductive layer can be formed on a film substrate,... for example, between the hard coating layer and the anti-reflection layer, or on the film substrate opposite side provided with the anti-reflection layer. The electro-conductive layer gives a function to prevent charging hard coat film during handling the supporting body (such as a resin film)” ([0317], [0318]). The following technical elements are disclosed in Prior Art 5 as corresponding elements: ① a electro-conductive layer prevents charging a film substrate; and ② a

low refractive index layer is laminated on the hard coating layer directly or via another layer. These technical elements are substantially identical to the charge preventing layer and low refractive index layer in Claim 12.

(3) Prior Art 5 relates to optical film, anti-reflection film, polarizing plate, and liquid crystal display device ([0001]), and its technical field is identical to that of Prior Art 1 for a plastic film to replace a cover plate made of tempered glass. It does not seem that the skilled person encountering the specification of Prior Art 1 would experience particular technical difficulty in applying Prior Art 1 to the above corresponding element of Prior Art 5.

(4) Thus, Claim 12 could be easily invented by combining prior arts 1 and 2 with Prior Art 1 by the skilled person. Therefore, its inventive step is denied.

#### **K. Whether the Inventive Step of Claim 13 Is Denied**

(1) Claim 13 is a dependent claim of Claim 1 and has a limiting element that “a crack does not occur when wound on a mandrel with a diameter of 4mm.” Even if Claim 13 has the above limiting element, it may be deemed that the above limiting element is included in Claim 1 in light of the Property Statements in Claim 1. Ultimately, it would be difficult to deem that Claim 13 has technical significance exceeding Claim 1.

(2) Thus, Claim 13 could be easily invented from prior arts 1 and 2 by the skilled person, as Claim 1. Therefore, its inventive step is denied.

#### **L. Summary of Discussion**

As examined above, the inventive step of the Inventions of Claims

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1, 11, and 13, the Inventions of Claims 5 to 10, and Claim 12 is denied by prior arts 1 and 2, prior arts 1, 2, and 4, and prior arts 1, 2, and 5, respectively. Thus, the patent for the Subject Invention shall be revoked in its entirety. The Subject Decision is consistent with the above analysis and did not err as the plaintiff argues.

**3. Conclusion**

The plaintiff's claim to revoke the Subject Decision is without merit and thus not granted. It is decided as ordered.

Presiding Judge	Sungsik YOON
Judge	Soonmin KWON
Judge	Taeksoo JUNG

[Appendix 1]

## **Main Contents of the Description of the Invention from the Specification of the Patented Invention**

### **[Field of The Invention]**

[0001] The present invention relates to a flexible plastic film. More specifically, the present invention relates to a flexible plastic film having excellent flexibility while exhibiting high hardness.

### **[Related Art and Problem to Be Solved]**

[0002] Recently, with the development of mobile devices such as smart phones and tablet PCs, thinning and slimming of substrates for display are required. Glass or tempered glass is commonly used as a material having excellent mechanical properties on windows or front boards for displays of mobile devices. However, the glass causes the weight increase of the mobile devices due to its own weight, and has a problem of breakage due to an external impact.

[0003] Therefore, a plastic resin is being studied as a substitute for glass. The plastic resin composition is lightweight but hardly has a risk of cracking and thus are suitable for the trend of pursuing lighter mobile devices. In particular, in order to implement a film having high hardness and abrasion resistance properties, a composition for coating a hard coating layer made of a plastic resin onto a support substrate has been proposed.

[0004] As a method of improving the surface hardness of the hard coating layer, a method of increasing the thickness of the hard coating layer can be considered. In order to ensure the surface hardness enough to replace the glass, it is necessary to implement a thickness of a certain hard coating layer. However, as the thickness of the hard coating layer is increased, the surface hardness may be increased but the occurrence of wrinkles and curls are increased due to curing shrinkage of the hard coating layer, and at the same time cracking and peeling of the coat layer are likely to occur. Thus, the practical application of this method is not easy.

[0005] Korean Patent Publication No. 2010-0041992 discloses a plastic film composition using a binder resin containing an ultraviolet-curable polyurethane acrylate-based oligomer and eliminating monomers. However, the plastic film disclosed above has insufficient strength to replace a glass

panel of a display with a pencil hardness of about 3H.

[0006] Meanwhile, a display in which a part of the display device is bent or flexibly warped for aesthetic and functional reasons has recently been attracting attention, and this tendency is noticeable particularly in mobile devices such as smart phones and tablet PCs. However, since glass is not suitable for use as a cover plate for protecting such a flexible display, it needs to be replaced with a plastic resin or the like. However, for that purpose, it is not easy to produce a thin film having sufficient flexibility while exhibiting high hardness like a glass.

[0007] It is an object of the present invention to provide a flexible plastic film having excellent flexibility and bending stability while exhibiting high hardness.

**[Solution to The Problem]**

[0011] With an interval of 4mm in the middle, allowing the film to stand while both sides being folded at 90 degrees toward the bottom surface at room temperature, and then being unfolded on a flat bottom surface 100,000 times, a crack of 1cm or longer would not occur.

**[Effect of The Invention]**

[0012] The flexible plastic film according to the present invention exhibits flexibility, bending property, high hardness, scratch resistance and high transparency, and hardly has a risk of damaging the film even in repetitive, continuous bending or long-time folding state. Hence, the flexible plastic film can be usefully applied to bendable, flexible, rollable or foldable mobile devices, display devices, front face and display unit of various instrument panels, and the like.

**[Details to practice the invention]**

[0014] The flexible plastic film according to the present invention includes a support substrate and an ultraviolet curable coating layer formed on at least one side of the support substrate and exhibits pencil hardness of 6H or more at a load of 750 g. With an interval of 4mm in the middle, allowing the film to stand while both sides being folded at 90 degrees toward the bottom surface at room temperature, and then being unfolded on a flat bottom surface 100,000 times, a crack of 1 cm or longer would not occur.

[0020] The flexible plastic film according to an embodiment of the present invention includes a support substrate and an ultraviolet curable coating layer formed on at least one side of the support substrate and exhibits pencil hardness of 6H or more at a load of 750 g. With an

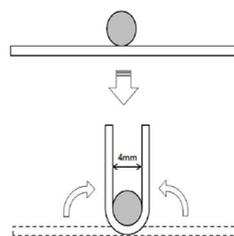
interval of 4mm in the middle, allowing the film to stand while both sides being folded at 90 degrees toward the bottom surface at room temperature, and then being unfolded on a flat bottom surface 100,000 times, a crack of 1 cm or longer would not occur.

[0021] In the present invention, “flexible” means a state having flexibility to such an extent that cracks of 3mm or more in length do not occur when wound on a cylindrical mandrel with a diameter of 4mm. Hence, the flexible plastic film of the present invention can be applied to a cover film of bendable, flexible, rollable, or foldable display or the like.

[0023] Among the cover plates made of a plastic resin, curved films forming a constant curvature and having a fixed form, or films having flexibility to the extent that can be bent by hand have been developed up to now, but it is inadequate to develop films having flexibility to such an extent that cracks do not occur even in repetitive bending or long-time folding state. Also, thinner films are advantageous for achieving flexibility but are relatively disadvantageous in terms of surface hardness. Thus, it is not easy to provide a film having high flexibility and high hardness at the same time.

[0024] The present invention provides a plastic resin film including an ultraviolet curable coating layer which is implemented so as to simultaneously satisfy the physical property balance between flexibility and high hardness, and a flexible plastic film which exhibits high hardness and particularly hardly has a risk of damage to the film even by repetitive bending or folding operation, and thus can be applied to a bendable, flexible, rollable, or foldable mobile device, or a display device.

[0027] According to FIG. 1, the film is placed so as to be horizontal with the bottom, and set so that the interval between the portions folded at a middle portion of the film is 4mm. Further, both sides of the films are folded at 90 degrees toward the bottom surface. By the method of measuring the stability against bending after 1Hour, the stability against bending can be measured. According to FIG. 1, the bending stability could be measured in



[FIG. 1]

a following way: to place a film so that it is parallel with the bottom; a space in the middle of the film to be fold shall be 4mm; and to repeat to fold both sides of the film at 90 degrees toward the bottom surface and then unfold them at a rate of 1 to 3 times/sec for 100,000 times at

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room temperature.

[0029] In measuring such stability, the flexible plastic film of the present invention has no crack of 1 cm or longer or 3mm or longer even after being bent 100,000 times. Practically, no crack occurs.

[0030] Therefore, even in actual application conditions such as folding, rolling or warping for a long period of time, the possibility of occurrence of cracks in the film is extremely low, and thus the flexible plastic film can be suitably applied for a cover plate of a flexible display.

[0032] Thinning of the film is advantageous for realizing flexibility, but the surface hardness becomes relatively low. Hence, it is not easy to provide a film having a high hardness simultaneously while having high flexibility. However, the flexible plastic film of the present invention achieved the bending stability of 100,000 times or more and the high hardness of 6H or more or 7H or more under a load of 750g by matching with the two conflicting physical properties.

[0034] The flexible plastic film of the present invention which simultaneously satisfies these bending stability and surface hardness can be obtained by optimizing the support substrate and the ultraviolet curable coating layer (hereinafter, referred to as a "coating layer") formed on the support substrate.

[0036] Among the conditions of the support substrate, the elastic modulus may be about 4GPa or more, or about 5GPa or more, or about 5.5GPa, or about 6GPa or more, and the upper limit value thereof may be about 9GPa or less, or about 8GPa or less, or about 7GPa or less. If the elastic modulus is less than 4GPa, sufficient hardness cannot be achieved, and if the elastic modulus exceeds 9GPa which is too high, it may be difficult to form a film having flexibility.

[0037] Also, the thickness of the support substrate may be about 20 $\mu$ m or more, or about 25 $\mu$ m or more, or about 30 $\mu$ m or more, and the upper limit value thereof may be about 200 $\mu$ m or less, or about 150 $\mu$ m or less, or about 100 or less, or about 60 $\mu$ m or less. If the thickness of the support substrate is less than 20 $\mu$ m, there is a possibility that breakage or curling occurs in the process of forming the coating layer, and it may be difficult to achieve high hardness. On the other hand, if the thickness exceeds 200 $\mu$ m, the flexibility deteriorates and it may be difficult to form a flexible film.

[0038] From the viewpoint of ensuring the processability for the flexible film and achieving the physical property balance between the

high hardness and the flexibility, a support substrate having an elastic modulus of 4GPa or more and 9GPa or less and a thickness in the range of 20 to 200 $\mu$ m can be used in a plastic film of the present invention.

[0041] Further, according to one embodiment of the present invention, the thickness ratio between the support substrate and the coating layer may be about 1:0.05 to about 1:1, or about 1:0.1 to about 1:0.8. When the thickness ratio between the support substrate and the coating layer is within the above range, a flexible plastic film exhibiting high hardness and flexibility can be formed more easily.

[0043] According to one embodiment of the present invention, the coating layer may be formed on both surfaces of the support substrate.

[0044] In the flexible plastic film of the present invention, the coating layer comprises a cross-linked copolymer of a 3- to 6-functional acrylate-based binder and a 7- to 20-functional urethane acrylate-based binder; and inorganic fine particles having a bi-modal particle size distribution including a first inorganic fine particle group having  $d_{50}$  of 20 to 35nm and a second inorganic fine particle group having  $d_{50}$  of 40 to 130nm.

[0045] As used herein, the acrylate-based means not only acrylate but also methacrylate, or derivatives in which substituents are introduced into acrylate or methacrylate.

[0046] The 3- to 6-functional acrylate-based binder is cross-linked with the 7- to 20-functional urethane acrylate-based binder to form a copolymer, and can impart high hardness to the coating layer formed after curing.

[0047] More specifically, the 3- to 6-functional acrylate-based binder may include trimethylolpropane triacrylate (TMPTA), trimethylolpropaneethoxy triacrylate (TMPEOTA), glycerin propoxylated triacrylate (GPTA), pentaerythritol tetraacrylate (PETA), or dipentaerythritolhexaacrylate (DPHA), and the like. The above-mentioned 3- to 6-functional acrylate-based binder maybe used alone or in combination of different types.

[0051] The 7- to 20-functional urethane acrylate-based binder is cross-linked with the 3- to 6-functional acrylate-based binder to form a copolymer, and may impart high hardness, flexibility and impact resistance to the coating layer formed after curing. The 7- to 20-functional urethane acrylate-based binder may be used alone or in combination of different types.

[0053] According to one embodiment of the present invention, the 7-

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to 20-functional urethane acrylate-based binder has a weight average molecular weight ranging from about 2,000 to about 8,000g/mol, or from about 3,000 to about 6,000g/mol, or from about 3,000 to about 5,000g/mol which may be preferable for the optimization of the physical properties of the coating layer.

[0055] When the weight average molecular weight and the acrylate equivalent weight of the 7- to 20-functional urethane acrylate-based binder are respectively within the ranges described above, coating layers having more optimized properties can be formed.

[0057] Meanwhile, the 7- to 20-functional urethane acrylate-based binder contained in the coating layer of one embodiment in the present invention includes at least 7 polyfunctional acrylate groups and at the same time has a urethane bond in the molecule, and thus is excellent in elasticity and flexibility. Accordingly, when it is cross-linked with a 3- to 6-functional acrylate-based binder at an appropriate weight ratio to form a copolymer, it serves to impart sufficient flexibility together with high hardness to the coating layer. The 7- to 20-functional urethane acrylate-based binder may contain 2 to 20 urethane bonds in one molecule.

[0058] As such, the coating layer according to one embodiment of the present invention includes a cross-linked copolymer in which the 3- to 6-functional acrylate-based binder and the 7- to 20-functional urethane acrylate-based binder are cross-linked to each other, thereby imparting high hardness and flexibility to the flexible plastic film. In particular, it has high stability against bending, rolling or folding, and thus it is possible to secure excellent flexibility and stability, which hardly has a risk of damaging the film even when repeatedly warped or folded for a long time.

[0059] The coating layer according to one embodiment of the present invention comprises inorganic fine particles having a bi-modal particle size distribution including a first inorganic fine particle group having  $d_{50}$  of 20 to 35nm and a second inorganic fine particle group having  $d_{50}$  of 40 to 130nm. As described above, the coating layer of the present invention uses the inorganic fine particles exhibiting a bi-modal particle size distribution including the first and second inorganic fine particle groups each having a specific range of  $d_{50}$ , thereby improving the hardness and flexibility of the coating layer simultaneously while maintaining the flexible property.

[0060] In the specification of the present invention, when a cumulative particle size distribution corresponding to particle sizes was measured using a laser light diffraction method (measurement method: size distribution by number is determined by using dynamic laser scattering, a solvent in which inorganic fine particles are dispersed, refractive index, viscosity, and dielectric constant of the inorganic fine particles, the equipment name: Malvern Zetasizer Nano-ZS90), the particle size at the 10% cumulative is set  $d_{10}$ , the particle size at the 50% cumulative to  $d_{50}$ , and the particle size at the 90% cumulative to  $d_{90}$ . The particle size distribution by the laser light diffraction method can show substantially the same distribution as that measured with SEM or TEM by diluting a dispersion liquid in which inorganic fine particles are dispersed in a solvent, or measured by analyzing the cross section of the coating layer containing the inorganic fine particles by SEM or TEM.

[0061] The first inorganic fine particle group having the small particle size range contributes to the improvement of the hardness, and the second inorganic fine particle group having the larger particle size range contributes to the improvement of bending property and flexibility. In this way, as other inorganic fine particle groups having different particle size ranges are mixed and used in addition to the cross-linked copolymer described above, it is possible to provide a coating layer in which the physical properties of hardness and flexibility are improved simultaneously.

[0068] According to one embodiment of the present invention, the first and second inorganic fine particle groups may be the same or different and each independently surface-modified with any one or more silane coupling agents selected from the group consisting of (meth)arylsilane, methacryloxysilane, vinylsilane, epoxysilane, and mercaptosilane.

[0088] For example, the flexible plastic film of the present invention can exhibit flexibility to such an extent that cracks do not occur when wound on a cylindrical mandrel with a diameter of 4mm or 3mm.

[0169] 3) Bending test

[0170] Each film was interposed and wound between cylindrical mandrels of various diameters and then the minimum diameter at which no cracks of 3mm or longer in length occurred was measured in accordance with JIS K5600-5-1.

[0172] 4) Bending stability test

[0174] Each of the films of embodiments and comparative examples was cut, but laser cutting was performed into a size of 80×140mm so as

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to minimize fine cracks at the edge portions. The laser cut film was placed on the measurement device, set so that the gap between the folded portions was 4mm, and then both sides of the film were folded at 90 degrees to the bottom surface and then unfolded in a continuous action (the film was folded in 1.5 seconds at a time) 10,000 times at room temperature.

[0175] After repeating 10,000 times, the film was peeled off and checked whether cracks occurred (OK, NG). Where no crack occurred, the maximum number of repetition where no crack occurs was measured by repeating the bending of 10,000 times and the checking of cracks. Where no crack occurred until repeating 100,000 times, it was determined that the bending stability is excellent.

[0183]

Table 3

	Embodiment 1	Embodiment 2	Embodiment 3	Embodiment 4	Embodiment 5	Embodiment 6	Embodiment 7
Pencil hardness	7H	8H	7H	8H	6H	7H	6H
Haze	0.4%	0.3%	0.4%	0.4%	0.4%	0.3%	0.4%
Transmittance	91.9%	91.8%	92.0%	91.9%	91.9%	92.1%	91.7%
Bending test	4mm	4mm	4mm	4mm	3mm	4mm	3mm
Bending stability	100,000 times OK						
Recovery	OK						

[0184]

Table 4

	Comparative example 1	Comparative example 2	Comparative example 3	Comparative example 4	Comparative example 5	Comparative example 6	Comparative example 7
Pencil hardness	4H	5H	8H	5H	4H	6H	8H
Haze	0.2%	0.3%	0.4%	0.4%	0.3%	0.5%	0.3%
	Comparative example 1	Comparative example 2	Comparative example 3	Comparative example 4	Comparative example 5	Comparative example 6	Comparative example 7
Transmittance	92.1%	91.9%	91.8%	91.8%	92.1%	92.0%	92.0%
Bending test	3mm	4mm	5mm	4mm	3mm	20mm	8mm
Bending stability	100,000 times OK	100,000 times OK	NG (10,000 times)	100,000 times OK	100,000 times OK	NG (10,000 times)	NG (10,000 times)
Recovery	OK	OK	NG	OK	OK	NG	NG

[Appendix 2]

## Main Contents of Prior Art 1

### [Claims]

[Claim 1] A plastic film, comprising: a support substrate; and a coating layer formed on at least one side of the support substrate, wherein the coating layer includes a cross-linked copolymer, in which a 3- to 6-functional acrylate-based monomer and a caprolactone group-containing multifunctional acrylate-based compound are copolymerized at a weight ratio of 5:5 to 8:2, and an inorganic fine particle dispersed in the cross-linked copolymer.

[Claim 8] The plastic film of claim 1, comprising 50 to 90 parts by weight of the cross-linked copolymer and 10 to 50 parts by weight of the inorganic fine particle when the total weight of the coating layer is regarded as 100 parts by weight.

[Claim 17] The plastic film according to claim 1, the supporting substrate may include one or more materials selected from the group consisting of polyethyleneterephthalate (PET), polyethylene, cyclic olefin polymer (COP), cyclic olefin copolymer (COC), polyacrylate (PAC), polycarbonate (PC), polyethylene (PE), polymethylmethacrylate (PMMA), polyetheretherketone (PEEK), polyethylenenaphthalate (PEN), polyetherimide (PEI), polyimide (PI), triacetylcellulose (TAC), methyl methacrylate (MMA) and fluoro-based resin.

[Claim 20] The plastic film of claim 1, wherein the coating layer has a thickness of 50 to 300  $\mu\text{m}$ .

### [Field of The Invention]

[0001] The present invention relates to a plastic film. More particularly, the present invention relates to a plastic film which exhibits high hardness, impact resistance, self-healing property and excellent processability.

[0007] Meanwhile, studies on coating materials having self-healing capability are actively progressing because they do not require an additional coating or repair process even when the surface is damaged, and are extremely favorable for appearance and performance maintenance of products. As a result of these studies, compositions containing UV curable compositions using self-healing oligomers have been suggested, but coating materials obtained from the compositions have problems of

insufficient surface hardness and self-healing capability.

**[Problem to Be Solved]**

[0008] In order to solve the above problems, the present invention provides a plastic film which exhibits high hardness, scratch resistance and excellent mechanical properties, and also excellent processability and self-healing property, without the problems of curling, warping or cracking.

**[Details to Practice The Invention]**

[0025] The thickness of the support substrate is not particularly limited, but the support substrate having a thickness of approximately 30 to approximately 1,200 $\mu$ m, or approximately 50 to approximately 800 $\mu$ m may be used.

[0030] As used herein, the term “caprolactone group-containing multifunctional acrylate-based compound” means a monomer compound, an oligomer or a polymer material, which includes a di- or multifunctional acrylate group crosslinkable with the tri- to hexafunctional acrylate-based monomer and also includes caprolactone or a repeating unit derived therefrom in the molecule.

[0031] The cross-linked copolymer of the caprolactone group-containing multifunctional acrylate-based compound is able to exhibit excellent physical properties such as flexibility, elasticity, impact resistance, durability or the like, and also self-healing capability against an external impact. Hence, the plastic film including the cross-linked copolymer which is prepared by cross linking polymerization of the caprolactone group-containing multifunctional acrylate-based compound and the tri- to hexafunctional acrylate-based monomer secures mechanical properties such as high scratch resistance, high hardness, wear resistance or the like, and also high elasticity or elastic recovery, and achieves excellent self-healing capability against scratch or external damage, with minimal curling or cracking occurrence.

[0033] According to one embodiment of the present invention, the caprolactone group-containing multifunctional acrylate-based compound may include, for example, a polycaprolactone acrylate-based polymer or polyrotaxane.

[0034] Generally, polyrotaxane means a structurally interlocked compound consisting of a dumbbell shaped molecule and a macrocycle, in which the dumbbell shaped molecule includes a certain linear molecule and blocking groups arranged at both ends of the linear molecule, the linear molecule penetrates the inside of the macrocycle, and the

macrocycle may move along the linear molecule and be prevented from escaping by the blocking groups.

[0035] According to one embodiment of the present invention, the polyrotaxane is characterized in that a caprolactone compound or a repeating unit compound derived therefrom binds to the macrocycle, and an acrylate-based compound binds to the end of the caprolactone compound.

[0045] The polyrotaxane compound having the above structure may have a weight average molecular weight of approximately 100,000 to approximately 800,000g/mol, approximately 200,000 to approximately 700,000g/mol, or approximately 350,000 to approximately 650,000g/mol. If the weight average molecular weight of the polyrotaxane compound is too low, a coating layer prepared therefrom may not have sufficient mechanical properties or self-healing capability, and if the weight average molecular weight is too high, the appearance or uniformity of the layer may be significantly lowered.

[0050] According to one embodiment of the present invention, the inorganic fine particles may be an inorganic fine particle having a diameter in the nano scale. For example, they may have a diameter of approximately 100nm or less, or approximately 10 to 100nm, or approximately 10 to 50nm. As the inorganic fine particles, for example, silica fine particles, aluminum oxide particles, titanium oxide particles, or zinc oxide particles may be employed.

[0059] The above described components included in the composition are cross-linked with each other by thermosetting to form a thermosetting resin which confers high hardness and processability on the coating layer.

[0061] The plastic film must be improved in surface hardness to a degree high enough to substitute for glass. Basically, the coating layer is required to have a predetermined thickness, in order to improve hardness of the plastic film. However, a thicker coating layer is more prone to setting shrinkage which leads to increased curling and decreased adhesiveness, and rolling up of the plastic film. In this regard, a planarization process of the support substrate may be additionally employed. Undesirably, the coating layer is likely to crack during planarization. Accordingly, it is difficult to prepare a plastic film which is high enough in hardness to substitute for glass, without a decrease in physical properties of the film.

[0062] According to one embodiment of the present invention, the

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presence of the thermosetting resin in addition to the cross-linked copolymer allows the plastic film to maintain high hardness and to prevent photo curing-induced curling. In addition, toughness of the film is improved to increase processability thereof. Hence, physical properties of the plastic film can be further reinforced.

[0083] After completely cured, the first coating layer may have a thickness of approximately 50 to approximately 300 $\mu$ m, or approximately 50 to approximately 200 $\mu$ m, or approximately 50 to approximately 150 $\mu$ m, or approximately 70 to approximately 150 $\mu$ m.

[0090] As the thickness of the coating layer is increased, UV light does not sufficiently reach the bottom of the coating layer, causing a problem of incomplete curing of the coating layer. According to the present invention, the curing of the thermosetting prepolymer composition under both Heat and UV can compensate for the insufficient photo curing which might occur, thereby reinforcing the hardness and physical properties of the coating layer. In addition, the IPN structure including the first cross-linked structure constructed by photo curing and the additional second cross-linked structure constructed by thermosetting the thermosetting prepolymer composition guarantees that the film has both high hardness and processability.

[0092] For use as a cover for mobile terminals or tablet PCs, it is important that the plastic film must have hardness or impact resistance elevated sufficiently to be a substitute for glass. Even when formed at a high thickness on the substrate, the coating layer according to the present invention is less prone to curling or cracking, and imparts the plastic film with high transparency, impact resistance, and self-healing capability.

[0095] Further, the plastic film of the present invention may have a pencil hardness of 6H or more, 7H or more, or 8H or more under a load of 1kg.

[0099] Further, when the plastic film of the present invention is disposed on a plane after being exposed to a temperature of 50°C or higher at a humidity of 80% or higher for 70 hours, the maximum distance at which each edge or side of the plastic film is spaced apart from the plane may be approximately 1.0mm or less, approximately 0.6mm or less, or approximately 0.3mm or less. More particularly, when the plastic film is disposed on a plane after exposure to a temperature of 50°C to 90°C at a humidity of 80% to 90% for 70 to 100Hours, each edge or side of the plastic film is spaced apart from the plane by

approximately 1.0mm or less, approximately 0.6mm or less, or approximately 0.3mm or less, maximally.

[0101] As described above, the plastic film of the present invention exhibits high hardness, impact resistance, self-healing property, scratch resistance, high transparency, durability, light resistance, high light transmittance or the like, and thus can be applied to various fields. For example, the plastic film of the present invention can be used in touch panels of mobile terminals, smart phones or tablet PCs, and cover or device panels of various displays as an alternative to a cover plate made of glass or reinforced glass.

[0152] 6) Cylindrical bending test

[0153] Each of the plastic films was wound on a cylindrical mandrel having a diameter of 3 cm, and cracking occurrence was examined. When the plastic film was not cracked, it was evaluated as OK. If the plastic film was cracked, it was evaluated as X.

[0157]

Table 2

	Embodiment 1	Embodiment 2	Embodiment 3	Embodiment 4	Embodiment 5	Embodiment 6	Embodiment 7	Embodiment 8
Pencil hardness	7H	6H	6H	8H	6H	6H	6H	6H
Self-healing capability	25 sec	10 sec	25 sec	25 sec	20 sec	25 sec	15 sec	20 sec
Light resistance	0.20	0.24	0.15	0.21	0.23	0.18	0.28	0.16
Transmittance	92.1	91.9	92.3	92.3	92.0	91.9	92.0	92.5
Haze	0.3	0.2	0.3	0.3	0.2	0.3	0.4	0.4
Bending test	OK							
Curl property	0.3mm	0.4mm	0.2mm	0.3mm	0.4mm	0.3mm	0.2mm	0.1mm
Impact resistance	OK							

**PATENT COURT DECISIONS**

[Appendix 3]

## Main Contents of Prior Art 2

### [Claims]

[Claim 1] A protective adhesive film, wherein an adhesive layer is prepared in a hard coating film composed of a film substrate with a hard coating layer, wherein the film substrate has a modulus of elasticity of 3 to 7GPa and thickness of 38 to 100 $\mu$ m, wherein the hard coating layer has a thickness of 5 to 25 $\mu$ m, wherein a hard coating layer surface of the hard coating film has pencil harness of 3H or more, where the adhesive layer has thickness of 5 to 20 $\mu$ m, total thickness of 60 to 150 $\mu$ m and storage elasticity of  $1.0 \times 10^5$  Pa or more at 80°C in the dynamic viscoelasticity spectrum at the frequency of 1Hz of the adhesive layer.

[Claim 4] A protective adhesive film of claim 1, wherein the hard coating layer is composed of cured materials of active energy ray curable resin composition containing a polymer (A), characterized in that, the polymer has (meth)acryloyl group in which (meth)acrylate-based polymer (a1) having a reactive functional group reacting to a side chain reacts with  $\alpha, \beta$ -unsaturated compound (a2) having a functional group that can react with the reactive functional group; and polyfunctional (meth)acrylate (B), characterized in that, the polyfunctional (meth)acrylate has 3 or more (meth)acryloyl groups in 1 molecule.

### [Field of The Invention]

<1> The present invention relates to a protective adhesive film for protecting a screen panel provided on a surface of a display device such as a liquid crystal panel or an EL display, a screen panel having the protective adhesive film, and a portable electronic terminal having the screen panel.

### [Problem to Be Solved]

<8> The problem to be solved by the present invention is to provide a protective adhesive film that can be laminated by a glass plate or the like through an adhesive layer to maintain a high surface hardness even when a thin panel is formed, and that foaming is unlikely to occur even at a high temperature and high humidity environment and provide a screen panel that combines thin, moderate elasticity and high surface hardness and is excellent in visibility, and provide a portable electronic

terminal that is hard to scratch on the surface of the panel and is excellent in visibility.

**[Solution to The Problem]**

<9> In the present invention, an object to be attached is provided via an adhesive layer by a protective adhesive film in which a adhesive layer having a specific thickness is provided on a hard coating film obtained by combining a base material having a specific elastic modulus with a hard coating layer at a specific thickness. Hard coating when there is no pressure-sensitive adhesive layer by appropriately relieving the dent of the film caused by the presence of the adhesive layer even when the pressure is locally applied to the surface of the protective adhesive film by impact or the like even when attached to the surface. The characteristic of a film can be expressed favorably. In addition, by adjusting the viscoelasticity of the adhesive layer, a suitable adhesive force can be realized while maintaining the above excellent surface hardness, and generation of bubbles can be suppressed even when the adhesive layer is attached to an object to be attached.

<10> That is, the present invention is a protective adhesive film in which the adhesive layer was provided in the hard coating film which consists of a film base material which has a hard coating layer. The elasticity modulus of the said film base material is 3 to 7GPa, the thickness is 38 to 100 $\mu$ m, and the thickness of the said hard coating layer is 5 to 25 $\mu$ m, the pencil hardness of the surface of the hard coating layer of the hard coating film is 3H or more, the thickness of the adhesive layer is 5 to 20 $\mu$ m, and the total thickness is 60 to 150 $\mu$ m.

**[Details to Practice The Invention]**

<14> In the present invention, the film base material whose elasticity modulus is 3 to 7GPa, thickness is 38 to 100 $\mu$ m, and light transmittance is 85% or more is used. As a protective adhesive film which protects the surface of a display body, etc., it is desired to make thickness at least 150 $\mu$ m or less because of a problem with an external appearance and the problem of peeling by the latching of an edge part. For this reason, it is necessary to be at least 100 $\mu$ m or less from a viewpoint that a base film needs to be a thin base material, and lamination with another layer is needed. In this case, when an elasticity modulus is less than 3GPa, when a protective adhesive film is formed, deformation of a film base material will arise easily, and when a protective adhesive film is formed, the fall of surface hardness cannot be suppressed. Moreover, if it is 7GPa or

more, a film base material will become hard too much and it will become impossible to follow a gentle curved surface at the time of sticking of a protective adhesive film. Moreover, when thickness is less than  $38\mu\text{m}$ , even if it is within the range of the said elasticity modulus, since the deformation of a film base material arises easily, when an adhesive layer is provided, the fall of surface hardness cannot be suppressed. Moreover, 85% or more of light transmittance is preferable, more preferably, it is 90% or more.

<20> As the hard coat agent, an active energy ray-curable resin composition can be suitably used. Further, among this, an active energy ray-curable resin composition that contains a polymer (A) which has (meth)acryloyl group in which (meth)acrylate-based polymer (a1) having a reactive functional group reacting to a side chain reacts with  $\alpha,\beta$ -unsaturated compound (a2) having a functional group that can react with the reactive functional group and polyfunctional (meth)acrylate (B), characterized in that, the polyfunctional (meth)acrylate has 3 or more (meth)acryloyl groups in 1 molecule. Such active energy ray-curable resin composition is particularly suitable, because it would be difficult to bend a curable object so obtained and the surface hardness would not fall even when an adhesive layer is prepared on a hard coating film where the curable object of composition is the hard coating layer. Also, in the present invention, the term "(meth)acrylate" refers to one or both sides of methacrylate and acrylate, and the same also applies to "(meth)acryloyl group" and "(meth)acrylic acid."

<28> 5,000 to 80,000 are preferable, as for the weight average molecular weight of the polymer (A) obtained by the manufacturing method and 5,000 to 50,000 are more preferable. 8,000 to 35,000 are further more preferable. When the weight average molecular weight is 5,000 or more, the effect of reducing the cure shrinkage is great, and the hardness becomes sufficiently high at 80,000 or less.

<86> The molecular weight of urethane acrylate (D) is preferably in the range of 500 to 1,500. When the molecular weight falls under this range, a cured film having a sufficiently high hardness is obtained, and curing shrinkage becomes small, so that the curl of the hard coat film having the cured film can also be reduced.

<106> [Adhesive layer]

<107> As an adhesive layer used by the present invention, the adhesive layer of 5 to 20 micrometers in thickness is used. In the present

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invention, by making thickness of an adhesive layer into the said thickness, sufficient adhesive force with an object to be adhered can be expressed, and even if stress concentration arises on the surface of a protective adhesive film, the elasticity modulus of the whole protective adhesive film can be kept high. Hence, it is deemed that the fall of the hardness of the hard coating layer provided in the adhesive film surface can be suppressed.

<108> A well-known acryl-based, rubber-based, silicone-based adhesive resin can be used for the adhesive used for the adhesive layer used by the present invention. Especially, the acryl-based copolymer containing the repeating unit derived from the acrylic acid ester which has a C2 to C14 alkyl group as a repeating unit is preferable in terms of a light resistance and heat resistance. For example, the acryl-type copolymer containing the repeating unit derived from n-butyl acrylate, isooctyl acrylate, 2-ethylhexyl acrylate, isononyl acrylate, ethyl acrylate, etc., are preferable.

<109> Moreover, it is preferable to contain in the range of 0.01 to 15 mass% of repeating units derived from the acrylic acid ester and other vinylic monomer which have polar groups, such as aHydroxyl group, a carboxy group, and an amino group, in a side chain. An acryl-type copolymer can be obtained by copolymerizing by solution polymerization method, block polymerization method, suspension polymerization method, emulsion polymerization method, ultraviolet irradiation method, and electron beam irradiation method. An average molecular weight of the acrylic-based copolymer is preferably 400,000 to 1.4 million, more preferably 600,000 to 1.2 million.

**Hearing Scope for Patent Cancellation Action Case**

[Appendix 4]

### Main Contents of Prior Art 3

#### **[Field of The Invention]**

[0001] The present invention relates to a film with protective coating layer comprising a base film made of a cyclic olefin resin and a protective coating layer laminated on at least one surface thereof.

#### **[Problem to Be Solved]**

[0007] An object of the present invention is to solve the above-mentioned problems of the conventional technology, and a film with a protective coat layer in which a protective coat layer is laminated on an annular olefin resin film as a base film has a characteristic that it is difficult to curl. Moreover, even if the film with a protective coat layer is bent, cracks that are practically problematic are not generated, and further, good adhesion is exhibited.

#### **[Solution to The Problem]**

[0008] In view of the characteristic that the annular olefin resin film has poor flexibility and is easily damaged compared to conventional polyester films or polymethacrylate films, the present inventor has conventionally used a coat layer to be laminated on the annular olefin resin film as a coating layer. It has a polyfunctional acrylate monomer and two or more (meth)acryloxy groups under the assumption that the object of the present invention can be achieved by forming a layer that is more flexible than the above but excellent in scratch resistance. When a photo cured layer of a photo curable composition of a specific composition containing an isocyanuric acid derivative and a photopolymerization initiator was laminated on a base film (that is, a cyclic olefin resin film) as a protective coating layer, it is difficult to curl in the case, exhibits excellent bending resistance, and no problem of practical use in adhesion too.

[0009] On the other hand, the present inventors were able to achieve a practically satisfactory level of adhesion in some cases where a similar protective coating layer was formed on the annular olefin resin film, but it could be said that the bending resistance was sufficient. In addition, we faced a situation where curling properties (hardness to curl) were not improved. As a result of various investigations for solving the problem,

the present inventor has found that when a film with a protective coating layer is subjected to a predetermined bending test, a round in a bending test when a crack occurs in the protective coating layer or the substrate film. If the value obtained by dividing the diameter R (mm) of the rod by the total thickness H ( $\mu\text{m}$ ) of the film with the protective coating layer is less than a specific value, the adhesiveness is not lowered while showing good bending resistance. Thus, the present inventors have found that the curling property can always be improved and completed the present invention.

[0010] That is, the present invention is a film with a protective coat layer comprising a base film made of a cyclic olefin-based resin, and a protective coat layer formed on at least one surface thereof. The photo curable composition in which the protective coat layer contains component (A) a polyfunctional acrylate monomer, component (C) an isocyanuric acid derivative having 2 or more (meth)acryloxy groups, and (E) a photopolymerization initiator. When the film with a protective coating layer is subjected to the following bending test, the diameter of the round bar when a crack occurs in the protective coating layer or the substrate film is R (mm). Provided is a film with a protective coating layer that satisfies the following formula when the total thickness of the layered film is H( $\mu\text{m}$ ).

[0011] Formula 1)  $0 < R/H \leq 0.045$

**[Details to Practice The Invention]**

[0019] Here, although the thickness of the base film varies depending on the type and performance of the optical device to which it is applied, it is usually 25 to 200 $\mu\text{m}$ , preferably 40 to 150 $\mu\text{m}$ . The thickness of the protective coat layer is usually 0.5 to 8 $\mu\text{m}$ , preferably 0.8 to 7 $\mu\text{m}$ .

[0061] <Bending test> Specifically, this bending test is performed by bending the longitudinal side of a film with a protective coating layer (100mm  $\times$  20mm) (10) by bridging it along a stainless steel round bar (11) with the protective coating layer outside. Join the tip with adhesive tape (12) to make a loop, clip (13) the joint, attach a 200 to 500g weight (load) (14) to the tip, hold for 5-10 seconds, then remove the weight and around the round bar (11). The surface of the protective coating layer or the substrate film surface on the protective coating layer side is observed with an optical microscope to examine the diameter of the round bar when the crack is generated, as shown in Table 1. In Table 1, "p" after a numeric for the diameter means the occurrence of crack on a surface of

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protective coating layer and “b” refers to the occurrence of crack on a surface of base film on the protective coating layer.

[0062] In addition, it has shown that it is hard to produce a crack with respect to a bending, so that the numerical value of this diameter is small. The thickness is preferably 4.0mm or less, more preferably 3.5mm or less.

[0063] In addition, the same test was conducted by changing the diameter of the round bar, and the diameter of the round bar when the film with the protective coating layer was broken is shown in Table 1. It shows that the smaller the numerical value of this diameter, the harder it is to cut against bending. Preferably it is 3.0mm or less, more preferably 2.0mm or less.

**Hearing Scope for Patent Cancellation Action Case**

[Appendix 5]

### Main Contents of Prior Art 4

#### [Claims]

[Claim 1] A hard coating film, comprising: an ultraviolet curable resin; a photoinitiator; an inorganic nano particle, characterized in that, an average particle size ( $D_{50}$ ) is 5 to 15nm and a hard coating layer containing an inorganic nano particle with the average particle size ( $D_{50}$ ) of 16 to 30nm, wherein pencil hardness is 3H or more, wherein 3 to 50% of the inorganic nano particles with the average particle size ( $D_{50}$ ) of 5 to 15nm and the inorganic nano particles with the average particle size ( $D_{50}$ ) of 16 to 30nm are surfaces treated with (meth)acrylate, wherein a weight ratio of the inorganic nano particles with the average particle size ( $D_{50}$ ) of 5 to 15nm and the inorganic nano particles with the average particle size ( $D_{50}$ ) of 16 to 30nm is 1:1 to 1:9.

[Claim 3] A hard coating film, comprising: an ultraviolet curable resin; a photoinitiator; a hard coating layer containing an inorganic nano particle with average particle size ( $D_{50}$ ) of 5 to 15nm; an inorganic nano particle with average particle size ( $D_{50}$ ) of 16 to 30nm; and an inorganic nano particle with average particle size ( $D_{50}$ ) of 31 to 100nm, wherein pencil hardness is 3H or more, wherein 3 to 50% of the inorganic nano particles with the average particle size ( $D_{50}$ ) of 5 to 15nm, the inorganic nano particles with the average particle size ( $D_{50}$ ) of 16 to 30nm, and the inorganic nano particles with the average particle size ( $D_{50}$ ) of 31 to 100nm are surfaces treated with (meth)acrylate, wherein a weight ratio of the inorganic nano particles with the average particle size ( $D_{50}$ ) of 5 to 15nm, the inorganic nano particles with the average particle size ( $D_{50}$ ) of 16 to 30nm, and the inorganic nano particles with the average particle size ( $D_{50}$ ) is 1:1 to 1.5:1.5 to 5.

#### [Field of The Invention]

[0001] The present invention relates to a hard coating film. More specifically, the present invention relates to a hard coating film which can maintain a pencil hardness of 3H or more and has a low curl even when the coating film thickness is 10  $\mu\text{m}$  or less by including two or more types of inorganic nano particles having different particle diameters.

#### [Problem to Be Solved]

[0005] An object of the present invention is to provide a hard coating film which can realize high hardness, for example, a pencil hardness of 3H or more even when the thickness of the coating film is 10 $\mu$ m or less.

[0006] Another object of the present invention is to provide a hard coating film having a pencil hardness of 3H or more and less curling.

**[Details to Practice The Invention]**

[0021] Where 2 or more types of inorganic nano particles are used in a hard coating layer of the present invention, the 2 or more types could be selected from a group of inorganic nano particles whose average diameters ( $D_{50}$ ) are 5 to 15nm, 16 to 30nm, and 30 to 100nm.

[0024] In another embodiment, a mixture of inorganic nano particles having an average particle diameter ( $D_{50}$ ) of 5-15nm, inorganic nano particles having an average particle diameter ( $D_{50}$ ) of 16-30nm, and inorganic nano particles having an average particle diameter ( $D_{50}$ ) can be used. Here, a weight ratio of inorganic nano particles having an average particle diameter ( $D_{50}$ ) of 5 to 15nm, inorganic nano particles having an average particle diameter ( $D_{50}$ ) of 16 to 30nm, and inorganic nano particles having an average particle diameter ( $D_{50}$ ) of 30 to 100nm can be 1 : 1 to 4 : 1 : 7. Within this range, the pencil hardness can be increased without increasing the thickness of the hard coat layer, and there is no curling. Preferably it can be 1 : 2 to 3 : 6 to 7.

[0029] The inorganic nano particle surface treatment agent may be at least one selected from the group consisting of vinyl-based, epoxy-based, methacryloxy-based, amino-based silane coupling agent and the like, but is not limited thereto. It is a common practice to surface-treat inorganic nano particles with a (meth)acryloxy-based silane coupling agent for chemical bonding with an acrylate resin.

[0030] The method of surface-treating inorganic nano particles with (meth)acrylate can be carried out by a conventional method. For example, it can be surface-treated through chemical bonding between inorganic nano particles and (meth)acrylate. For the above chemical bonding, the inorganic nano particles may be pretreated with at least one silane coupling agent selected from the group consisting of vinyl-based, epoxy-based, (meth)acrylic-based and amino-based.

[Appendix 6]

### Main Contents of Prior Art 5

#### **[Claims]**

[Claim 1] An optical film, comprising: a film substrate; and at least one of hard coating layer or back coating layer as a functional layer containing a resin, wherein the film substrate contains a mixture of a thermoplastic acrylic resin (A) and a cellulose ester resin (B), and wherein a content ratio by mass of the thermoplastic acrylic resin (A).

[Claim 15] An anti-reflection film manufactured using the optical film stated in one of claims 1 through 14, wherein the anti-reflection film contains a hard coating layer and a low refractive index layer is laminated on the hard coating layer directly or via another layer.

#### **[Field of The Invention]**

[0001] The present invention relates to an optical film, an anti-reflection film, a polarizing plate, and a liquid crystal display device.

#### **[Problem to Be Solved]**

[0027] The problems to be solved are to provide an optical film which is excellent in adhesive properties between a film substrate and a functional layer such as a hard coating layer and surface hardness, brittleness is improved, and is transparent, low moisture absorptive and high heat resistive. Further, the problem is to further provide an anti-reflection film, a polarizing plate and a display device employing the optical film. That is to provide an optical film suitably used for a polarizing plate protecting film, particularly, in a large liquid crystal display device or a liquid crystal display device used outdoors.

#### **[Details to Practice The Invention]**

[0289] Metal oxide micro particles may be subjected to a surface treatment by an organic compound. By surface modification of the surface of metal oxide micro particles with an organic compound, dispersion stability in an organic solvent is improved and control of a dispersed particle size becomes easy as well as aggregation and sinking by aging can be restrained. Hence, a preferable surface modifying amount with an organic compound is 0.1 to 5 weight% against metal oxide particles and more preferably 0.5 to 3 weight%. Examples of an organic compound utilized for the surface treatment include polyol, alkanolamine,

stearic acid, silane coupling agent and titanate coupling agent. Among them, silane coupling agent is preferable. Surface treatments of at least two types may be combined.

[0317] The electro-conductive layer can be formed on a film substrate, and can be coated, for example, between the hard coating layer and the anti-reflection layer, or on the film substrate opposite side provided with the anti-reflection layer.

[0318] The electro-conductive layer gives a function to prevent charging hard coat film during handling the supporting body (such as a resin film), and concretely,  $\pi$  conjugated electro-conductive polymer, ionic polymer compound, metal oxide and the like, described above in terms of the hard coating layer are used preferably.

**PATENT COURT OF KOREA  
FIRST DIVISION  
DECISION**

**Case No.** 2020Heo5238 Rejection (Patent)

**Plaintiff** A  
Representative Yan Ren  
Counsel for Plaintiff  
Patent Attorney Jaeyeong Lee  
Subcounsel for Plaintiff  
Patent Attorney Jina Ha

**Defendant** Commissioner of Korean Intellectual  
Property Office  
Counsel for the Defendant Jongho Kim

**Date of Closing Argument** March 16, 2021

**Decision Date** April 22, 2021

**ORDER**

1. The plaintiff's claim is dismissed.
2. The litigation cost arising from this litigation shall be borne by the plaintiff.

**PLAINTIFF'S DEMAND**

The IPTAB Decision 2019Won3491 decided June 26, 2020

(hereinafter, the “Subject Decision”) shall be revoked.

## OPINION

### 1. Basic Facts

#### A. Plaintiff’s Invention at Issue

(1) Title of Invention: Applications of and a Group of Glycosyltransferases

(2) Original Patent’s International Filing Date/ Translation Filing Date/ Original Patent Application Number/ Divisional Application Date/ Application number: December 06, 2013/ July 03, 2015/ No. 10-2015-7017909/ December 28, 2017/ No. 10-2017-7037730 (Date of Claimed Priority: December 06, 2012 and June 07, 2013)

(3) Claims (as amended on December 05, 2018; corrected parts underlined)

**【Claim 1】** A method for in vitro glycosylation, comprising: a step to transfer, in the presence of glycosyltransferase, a glycosyl group of a glycosyl donor to C-20 and C-6 sites of tetracyclic triterpenoid; and a step to form a glycosylated tetracyclic triterpenoid-based compound, wherein the glycosyltransferase is selected from a group consisting of glycosyltransferase of SEQ ID Nos: 2, 16, 18, or 20.

**【Claims 2-15】** (Deleted)

(4) Summary of Invention

#### **1 Technical Field**

The present invention relates to the biotechnology and the phytobiology

field. Specifically, the present invention concerns glycosyltransferases and use thereof [0001].

**② Background Art and Problem to be Solved**

Saponins isolated from *Panax ginseng* and the congener plants thereof (including *Panax. notoginseng* and *Panax quinguefolium*, etc.) are collectively named as ginsenosides. Ginsenosides belong to triterpene saponins and they are the main active ingredient of *Panax* [0002].

The physiological functions and pharmaceutical values of ginsenosides can dramatically vary with different glycosyl groups binding sites, and composition and length of carbohydrate chains [0005].

The function of glycosyltransferases is transferring a glycosyl(s) group of glycosyl donor(s) (nucleotide diphosphate sugar such as UDP-glucose) to different glycosyl acceptor(s)... The function of glycosyltransferases involved in saponin glycosylation in *ginseng* is transferring glycosyl groups of glycosyl donors to hydroxy group at C-3, C-6, or C-20 of saponin aglycones, thereby forming saponins with various pharmaceutical values [0007].

At present, upon analyzing the transcriptome of *P. ginseng*, *P. quinguefolium* and *P. notoginseng*, researchers have identified a large number of glycosyltransferase genes. However, which of them are involved in ginsenosides synthesis remains ambiguous. The studies on isolation and purification of glycosyltransferases are making slow progress due to the numerous kinds of glycosyltransferases and the low concentration of them in *ginseng* [0008].

Rare ginsenosides refer to the saponins with extremely low concentration in *P. ginseng* [0009].

At present, there is no method to effectively produce rare ginsenosides CK, F1, Rh1, Rh2 and Rg3 in this field. Therefore, there is an urgent need to develop various glycosyltransferases with high specificity and efficiency [0017].

**③ Solution to the Problem**

The purpose of the present invention is to provide a group of glycosyltransferases and applications thereof [0018].

Upon extensive and intensive studies, for the first time, the inventors provided how the glycosyltransferases gGT25 (SEQ ID NO.: 2), gGT25-1 (SEQ ID NO.: 16), gGT25-3 (SEQ ID NO.: 18), gGT25-5 (SEQ ID NO.: 20), gGT29 (SEQ ID NO.: 26), gGT29-3 (SEQ ID NO.: 28), gGT29-4

(SEQ ID NO.:55), gGT29-5 (SEQ ID NO.:57), gGT29-6 (SEQ ID NO.:59), gGT29-7 (SEQ ID NO.:61) and 3GT1 (SEQ ID NO.: 22), 3GT2 (SEQ ID NO.: 24), 3GT3 (SEQ ID NO.: 41), 3GT4 (SEQ ID NO.: 43), gGT13 (SEQ ID NO.: 4), and gGT30 (SEQ ID NO.: 6) are working in the catalytic glycosylation of terpenoids and synthesis of new saponins. Specifically, the glycosyltransferases according to the present invention are capable of specifically and efficiently catalyzing the glycosylation of the hydroxyl group(s) at C-20 and/or C-6 and/or C3 of a tetracyclic triterpenoid substrate, and/or transferring a group of glycosyl(s) of glycosyl donors to the first glycosyl at C-3 of a tetracyclic triterpenoid compound to extend the carbohydrate chain [0180].

The forward primers to be used are as follows [0318]: 5'-GCCGGAGCTCATGAAGTCAGAATTGATATTC-3' (SEQ ID NO.: 13) with a SacI recognition site added to its 5' end: GAGCTC [0319];

The reverse primers to be used are as follows [0320];

5-GCCGCTCGAGTTAATGATGATGATGATGATGCATAATTCCTCA AATAGCTTC-3' (SEQ ID NO.: 14) with a XhoI recognition site added to its 5' end: CTCGAG. A 6×His Tag was introduced into the reverse primer for expression detection by Western Blot and purification [0321].

## B. IPTAB Decision

1) On December 06, 2013, the plaintiff filed an international patent application as PCT/CN2013/088817 (Chinese) under the title of “A Group of glycosyltransferases and Use Thereof” (hereinafter, the “International Patent Application at Issue”) and attached the specification, claims, drawings, and an electronic file of a sequence listing of [Appendix 1]<sup>1)</sup> to the application.

2) On July 03, 2015, which is within a period for submitting domestic documents, the plaintiff submitted the specification, claims, drawings, and summary of the Korean translation submitted on the

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1) When being compared with [Appendix 1] Sequence Listing, which is a sequence listing electronic file attached to the following divisional application, they are identical except the fact that <110>, <120>, and <213> are described in Chinese.

## PATENT COURT DECISIONS

international filing date (hereinafter, the “Original Application at Issue”) to the Commissioner of the Korean Intellectual Property Office (hereinafter the “KIPO”) under Articles 203(1) and 201(1) of the Old Patent Act (before being amended by Act No. 12753, June 11, 2014; hereinafter, the “Old Patent Act”). However, the plaintiff did not attach an electronic file of the sequence listing as disclosed in [Appendix 1].

3) On December 28, 2017, the plaintiff filed the divisional application for the Original Application at Issue (hereinafter, the “Divisional Application at Issue”) and attached an electronic file of the sequence listing as disclosed in [Appendix 1].

4) On December 05, 2018, the plaintiff corrected Claim 1 and deleted Claims 2 to 15.

5) On February 07, 2019, the patent examiner of the KIPO sent a Notice of Grounds for Rejection to the plaintiff, stating that “sequence numbers 1 to 12 and 15 to 70 stated in the sequence listing of the Divisional Application at Issue do not fall within the matters stated in the specification or drawings initially accompanying the original application and thus violate Article 52(1) of the Patent Act, which stipulates the requirements for the divisional application.”

6) The plaintiff, on April 08, 2019, submitted a written argument, stating that “the sequence listing is a mere attachment to the specification, and it is not required to submit a translation stipulated by Article 208(3) of the Old Patent Act, which provides a scope of correction to an international patent application. Therefore, the submission of the sequence listing already included in the international patent application for the divisional application falls within the scope of matters disclosed in the specification or drawings initially accompanying the original application and thus satisfies the requirements under Article 52(1) of the Old Patent Act.” However, on September 20, 2019, the KIPO examiner issued a decision to reject the application stating that the grounds in Article 52(1) of the Old Patent

Act were still not resolved in the Divisional Application at Issue.

7) In response, the plaintiff filed an appeal regarding the rejection with the Intellectual Property Trial and Appeal Board (hereinafter the “IPTAB”) against the defendant, arguing that “the IPTAB erred in its decision to reject the Divisional Application at Issue” on October 22, 2019.

8) The IPTAB issued an administrative decision to dismiss the plaintiff’s appeal on December 24, 2019, concluding that “the sequence listing of amino acids or nucleic acids is the specification, and even if the Divisional Application at Issue shall be made within a scope of matters disclosed in the ‘the translated version of the specification, scope of claims, drawings and abstract of an international patent application’ under Article 201(6) of the Old Patent Act, the Korean translation submitted at the time of the Original Application at Issue only discloses the amino acids or nucleic acids as sequence numbers but does not disclose what kinds of amino acids or nucleic acids sequence numbers 1 to 70 have. Thus, the Divisional Application at Issue violates the requirements for the divisional application.”

### **C. Relevant Laws and Regulations**

As disclosed in [Appendix 2].

**[Factual Basis]** Undisputed facts, Plaintiff’s Exhibits 1 through 4, Defendant’s Exhibit 1, the purport of the overall arguments

## **2. Whether the IPTAB Erred**

### **A. Summary of Parties’ Arguments and The Issues**

1) Summary of Plaintiff’s Arguments

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It would be reasonable to determine the “specification or drawings initially accompanying a patent application” prescribed by Article 52(1) of the Old Patent Act, under which the divisional application of the international patent application that has entered the national phase in Korea is decided, based on ① a Korean translation in the case of the specification, claims, and captions in the drawings for which a translation shall be submitted and ② an international patent application in the case of drawings for which a translation may not be submitted (excluding captions) and a sequence listing or an electronic file of the sequence listing, in light of the following: Articles 201(6), 202(2), and 208(3) of the Old Patent Act; Article 49.5 of the Old Regulations under the PCT (as in force from January 1, 2013; hereinafter, the “Old Regulations under the PCT”); the characteristics of the sequence listing composed of language-neutral expressions, such as alphabet character symbols, etc.; and the fact that major jurisdictions, such as the US, EU, Japan, etc., allow divisional applications based on international patent applications. Therefore, it is erroneous for the IPTAB to decide that the Divisional Application at Issue is unlawful on the ground that the Original Application at Issue, which is a Korean translation, did not disclose the sequence listing or an electronic file of the sequence listing.

### 2) Summary of Defendant’s Arguments

The Divisional Application at Issue contains the sequence listing not included in the specification of the Original Application at Issue and thus exceeds a permitted limit prescribed by Article 52(1) of the Old Patent Act. However, the sequence listing or the electronic file of the sequence listing is a part of the specification, a translation of which shall be submitted in light of the following: Articles 201(4), 201(6), and 208(3) of the Old Patent Act; Article 4, 21(2), and proviso to 21-2(1) of the Enforcement Rules of the Old Patent Act (before being amended by Ordinance of the Ministry of Trade, Industry and Energy

No. 103, December 30, 2014; hereinafter, the “Enforcement Rules of the Old Patent Act”); and Article 5.2 of the Old Regulations under the PCT. The plaintiff’s arguments based on other premises are without merit.

### 3) Disputed Issues

The issue is whether the fact that attaching the electronic file of the sequence listing to the Divisional Application at Issue as disclosed in [Appendix 1], which was not included in the specification of the Original Application at Issue exceeds a permitted limit for the divisional application prescribed in Article 52(1) of the Old Patent Act.

## **B. Discussion**

### 1) Relevant Legal Principles

An applicant who has filed a single patent application for two or more inventions may divide the application into two or more applications within the scope of the features described in the specification or drawings accompanying the initial patent application, within a period falling under any of the following sub-paragraphs (Article 52(1) of the Old Patent Act).

Furthermore, Article 47(2) of the Patent Act stipulates the scope that can be amended as “an amendment ... shall be made within the scope of the features disclosed in the specification or drawings initially attached to the patent application.” Here, the features disclosed in the specification or drawings initially attached to the patent application shall be what is explicitly disclosed in the initial specification, etc., or what could be understood by a person skilled in the art as the features disclosed in the divisional application identical to those disclosed in the initial specification, etc. in light of common knowledge in the technological field at the time when the application was filed (See,

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e.g., Supreme Court Decision 2005Hu3130, decided February 08, 2007).

### 2) Meaning of “Specification or Drawings Initially Attached to The Patent Application”

It would be reasonable to view that the “specification or drawings initially attached to the patent application,” which forms the standard for the scope of the divisional application when applying Article 52(1) of the Old Patent Act to an original application based on an international patent application in a foreign language, shall mean a Korean translation of the specification, claims, and drawings (captions in drawings) submitted on the international filing date.

#### a) Article 201(6) of the Old Patent Act

As Article 201(6) of the Old Patent Act stipulates that “the translated version of the specification, scope of claims, drawings, and abstract of an international patent application (the specification, scope of claims, drawings, and abstract submitted on the international filing date, in cases of an international patent application written in the Korean language) shall be deemed the specification, drawings, and abstract submitted under Article 42(2),” an international patent application filed in a foreign language shall regard, as the specification, not an international application but a Korean translation. This is certain and clear in light of the following facts: as shown in [Appendix 3], as the Patent Act was partially amended on June 11, 2014, Article 200-2 was newly inserted, and Paragraph (2) provides, unlike Article 201(6) of the Old Patent Act, that “a description of an invention, claims, and drawings submitted by the international filing date of an international patent application shall be deemed the specification and drawings initially accompanying a patent application filed under Article 42(1)”;

and Article 8 of the Addenda stipulates that the previous provisions shall apply to the patent application filed

before the enforcement of the amended Act<sup>2)</sup>.

b) Relation with Articles 202(2) and 208(3) of the Old Patent Act

When applying the extended first-to-file provisions under Article 29(3) of the Patent Act to an international patent application accompanying the claimed priority in Korea, Article 202(2) of the Old Patent Act classifies the “scope of features disclosed in the specification or drawings initially attached to the patent application” as follows: a Korean translation for parts where the Korean translation shall be submitted, such as the specification, claims, and drawings (limited to captions in the drawings); and an international patent application for parts where a translation may not be submitted, such as drawings except captions. On the other hand, Article 208(3) of the Old Patent Act stipulates special provisions to Article 47(2) of the Old Patent Act as to the scope that could be amended in an international patent application filed in a foreign language and also classifies, like Article 202(2) of the Old Patent Act, as follows: a Korean translation for parts where the Korean translation shall be submitted; and an international patent application for parts where a translation may not be submitted.

However, it may not be deemed that the construction of the “scope of features disclosed in the specification or drawings originally attached to the patent application,” which is the standard of the divisional application for an original application based on an international patent application, is changed due to special provisions for an earlier-filed application extended in an international patent application or special provisions for the scope of amendment in an international patent application filed in a foreign language. As examined above, it shall be reviewed whether this falls within the scope of a Korean translation

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2) The main contents modified according to the above amendment are as stated in the comparison table at the end of [Appendix 3].

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under Article 201(6) of the Old Patent Act.

### c) The Nature of Sequence Listing And an Electronic File of Sequence Listing

#### (1) The fact that the sequence listing constitutes a part of the specification

A sequence listing constitutes a part of the specification in light of the following facts: the parties do not argue regarding the fact that the sequence listing constitutes a part of the specification; Article 21(2) of the Enforcement Rules of the Old Patent Act provides that the specification shall be prepared in appendix form 15; appendix form 15 is organized such that the specification shall include [Sequence Listing Free Text]; and Article 5(2) of the PCT, which is a provision for the disclosure of a sequence listing in the specification, provides, as to the disclosure of a sequence listing of amino acids and nucleic acids, that “a sequence listing complying with the standard ... presented as a separate part of the description in accordance with that standard.”

#### (2) Provisions of the Old Patent Act

Article 21(1) and (2) of the Enforcement Rules of the Old Patent Act provide that the specification shall be prepared in appendix form 15, and the drawings shall be prepared in appendix form 17.

According to appendix form 15, the specification shall be prepared with the following parts: [Title of Invention]; [Technical Field]; [Background Art]; [Content of Invention]; [Brief description of Drawings]; [Detailed Description of the Embodiment]; [Claims]; and [Sequence Listing]. Also, [Detailed Description of the Embodiment] shall be prepared with [Embodiment], [Industrial Applicability], [Accession number], and [Sequence Listing Free Text]. Furthermore, Appendix form 15 provides “Drafting Guidelines” that contains the following: “if required, free text in the sequence listing shall be stated repetitively in [Sequence Listing Free Text]”, and that “where a patent application is filed including a nucleic acid sequence or an amino acid

sequence, a sequence listing prepared in [Sequence Listing] under ‘Drafting and Submission Guidelines for a Sequence Listing in Patent Applications, etc., including nucleic acid sequences or amino acid sequences’ publicly announced by the Commissioner of KIPO.” The sequence information of the sequence listing is stated in language-neutral terms, whereas the free text can be prepared freely as to the sequence characteristics. The “standards for preparation of a nucleic acid sequence listing or amino acid sequence listing” (see Defendant’s Exhibit 14 and 3B of [Appendix Table 2]) state that “where a sequence listing in the specification contains free text, the free text shall be stated again in the relevant part of the specification in the relevant language.” A sequence listing is different from drawings (excluding captions) that do not need to be translated, in that the former contains free text that may be translated.

### (3) Old Regulations under the PCT

Article 49.5 of the Old Regulations under the PCT provides that “no designated office shall require the applicant to furnish to it a translation of any statement contained in the sequence listing in the description if such sequence listing part complies with Rule 12.1(d) and if the description complies with Rule 5.2(b).” (the plaintiff argues based on the above provision that the sequence listing may not be submitted in a translation.)

Article 12.1(d) of the Regulations under the PCT, which the above provision premised as having been satisfied, stipulates that “any description contained in the sequence listing of the description referred to in Rule 5.2(a) shall be presented in accordance with the standard provided for in the Administrative Instructions.” Article 33 of the Administrative Instructions provides that “free text is a wording describing characteristics of the sequence under numeric identifier <223> (Other information) which does not use language-neutral vocabulary as referred to in paragraph 2(vii).” Further, Article 36 stipulates that “where the sequence listing as a part of the international

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application contains free text, any such free text shall be repeated in the main part of the description in the language thereof.” Also, Article 5.2(b) of the Old Regulations under the PCT relates to the disclosure of nucleotide and/or amino acid sequences and provides that “where the sequence listing part of the description contains any ‘free text’ as defined in the standard provided in the Administrative Instructions, that ‘free text’ shall also appear in the main part of the description in the language thereof.” Here, Article 26 of the Old Patent Act, which stipulates that “where a treaty contains special provisions relating to patents that are different from those of this Act, the description will be written pursuant to special provisions”, was abolished by Act No. 11117, December 02, 2011, and Articles 21(1) and 21(2) of the Enforcement Rules of the Old Patent Act and forms thereof require a translation of the free text. Hence, it may not be said that it is not required to submit a translation of the sequence listing only on the ground that Article 49.5 of the Regulations under the PCT stipulates that “no designated office shall require the applicant to furnish to it a translation of any statement contained in the sequence listing in the description.” Rather, the purpose of the above provision is not to require language-neutral expressions to be translated on the premise that, where free text is disclosed in a foreign language, the free text shall be translated. Thus, a designated office is not obligated not to require a translation of the sequence listing to be submitted.

### (4) Item <223> of the Specification at Issue

The plaintiff argues that it is not required to submit a translation of the free text in light of the following facts: even if the electronic file of sequence listing attached to the Divisional Application at Issue, it corresponds to a coined wording without any meaning; and the content corresponding to the free text is disclosed without translation in [0289] to [0311] of the specification of the Divisional Application at Issue.

However, it may not be deemed, as the plaintiff argues, that there is no need to submit a translation of the free text in light of the

following facts: free text in the electronic file of the sequence listing of the Divisional Application at Issue contains the titles of genes or proteins named in the Divisional Application at Issue, such as gGT25, gGT25-1, gGT25-3, gGT25-5, etc., which makes translation impossible from the first place; and <223> of the sequence listing attached to the specification of the Divisional Application at Issue contains the expression “synthesized nucleotide,” which can be translated. Thus, the plaintiff’s arguments are without merit.

3) Comparison with the Original Application at Issue

a) Sequences in the Original Application at Issue and the Divisional Application at Issue

① Sequence Numbers 13 and 14 disclosed in [0317] and [0319] of the specification of the Original Application at Issue and Sequence Numbers 13 and 14 disclosed in [0319] and [0321] of the specification of the Divisional Patent Application at Issue are different from Sequence Numbers 13 and 14 in the electronic file of the sequence listing attached to the Divisional Patent Application at Issue and are not identical to any sequence number in the electronic file of sequence listing. ② Even if it is stated that the sequence CTCGAG is added to Sequence Numbers 32 and 33 in [0359] of the specification of the Original Application at Issue and [0363] of the specification of the Divisional Application at Issue, such sequence is not included in Sequence Numbers 32 and 33 disclosed in the electronic file of sequence listing attached to the Divisional Application at Issue. ③ Even if it is stated that the GGATCC sequence is added to Sequence Numbers 36 and 38 in [0386] and [0387] of the specification of the Original Application at Issue and [0390] and [0391] of the specification of the Divisional Application at Issue, such sequence is not included in Sequence Numbers 36 and 38 disclosed in the electronic file of sequence listing attached to the Divisional Application at Issue.

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As shown above, Sequence Numbers 13 and 14 disclosed in the specification of the Original Application at Issue are not identical to Sequence Numbers 13 and 14 added to the Divisional Patent Application at Issue. Also, Sequence Numbers 13 and 14 disclosed in the specification of the Divisional Application at Issue are not identical to Sequence Numbers 13 and 14 in the sequence listing. This in itself indicates that a new sequence that is conflicting with the specifications was added. Hence, Sequence Numbers 1 to 12 and 15 to 70 added to the Divisional Application at Issue fall under a case where a new matter is added that could not have been known in the Original Application at Issue.

### b) Whether Sequence Listing Could Be Understood Obviously From International Patent Application at Issue

The plaintiff asserts that since the sequence listing submitted in the specification of the International Patent Application was already disclosed through the WIPO web-site prior to the Original Application at Issue, a person having ordinary skill in the art (hereinafter, a “skilled person”) could understand the sequence listing in the Divisional Application at Issue from what is disclosed in the International Patent Application at Issue.

However, it may not be deemed that a sequence listing submitted in an international patent application in a foreign language is certainly identical to the sequence listing when entering a national phase, in light of the following facts: under Article 201(4) of the Old Patent Act, where matters disclosed in the specification or claims and captions in the drawings of an international patent application are not disclosed in a translation submitted within the deadline for submission of a domestic brief, it shall be deemed that they are not disclosed in the specification and claims of the international patent application, or that there is no caption in the drawings; and an applicant can amend or change the details of the invention within the scope in which their identity is recognized when the applicant submits a translated

application in the national phase after filing an international patent application in a foreign language or thereafter. Also, a part of the sequence listing (Sequence Numbers 13 and 14) disclosed in the specification of the Original Application at Issue is not identical to the sequence listing attached to the International Patent Application at Issue and the Divisional Application at Issue. Thus, it may not be deemed that the skilled person would be able to obviously understand the sequence listing of the Divisional Application at Issue from the International Patent Application at Issue. The plaintiff's argument is thus, without merit.

### **C. Summary of Discussion**

The Divisional Application including a sequence listing not attached to the Original Application at Issue does not fall within the scope of the statement made in the initial specification of the original application on which the divisional application under Article 52(1) of the Old Patent Act is based and thus may not be deemed a legitimate divisional application. Thus, the IPTAB Decision rejecting the Divisional Application at Issue shall be upheld.

### **3. Conclusion**

Accordingly, the plaintiff's claim to revoke the IPTAB decision is without merit and thus, dismissed as ordered.

Presiding Judge	Seungryul SEO
Judge	Seongjin KOO
Judge	Kyung Ock LIM

[Appendix 1]

**Sequence Listing of Amino Acids and Nucleic Acids related to  
Glycosyltransferase**

SEQUENCE LISTING

<110> SHANGHAI INSTITUTES FOR BIOLOGICAL SCIENCES,  
CHINESE ACADEMY OF SCIENCES

<120> Group of Glycosyltransferases and Use Thereof

<130> P2013-1295

<150> CN 201210520787.5

<151> 2012-12-06

<150> CN 201310227689.7

<151> 2013-06-07

<160> 70

<170> PatentIn version 3.5

<210> 1

<211> 1425

<212> DNA

<213> Panax ginseng

<220>

<221> misc\_feature

<223> gGT25

<400> 1

atgaagtcag aattgatatt ctgcccccc cggccatcg gacacctgt gggaatggtg 60

gagatggcta aactcttcat cagtcgacat gaaaacctct cggtcaccgt cctcatcgcg 120  
 aaattctaca tggatacggg ggtagacaac tacaataaat cactcttaac aaaccctacc 180  
 ccgcgtctca caattgtaaa tctcccggaa accgaccccc aaaactatat gctcaacca 240  
 cgccatgcca tctttcctag cgatcatgag actcagaaga cacacgtgcg agacataata 300  
 tcaggcatga ctcagtccga gtcgactcgg gtcgttggtt tgctggctga cctttgttc 360  
 atcaacatta tggacattgc caatgagttc aatgtccaa ctatgtata ctcccctgcc 420  
 ggagccggtc atctfggcct cgcgttccat ctccagacac tcaacgacaa aaagcaagat 480  
 gtgaccgagt tcaggaactc ggacactgag ttattggtag cgagttttgc aaaccgggt 540  
 cccgccgagg tctfcccgtc gatgtatgtg gataaagaag gtgggatga ttattgttt 600  
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 gaaccctatg cgatcaattc cctccggatg gatagtatga tccctccgat ctaccgggtg 720  
 ggaccatac taaatctaa cggatgatggc caaaactccg atgaggctgc tgtgatcctt 780  
 ggttggtag atgatcaacc accttcatct gtggtgtttt tgtgctttgg tagctatgga 840  
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 tggccaatgt atggtagaca acaactcaat gcttttgaga tggtaagga gttaggatt 1200  
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 gttagggcag aagaaatcga gacaaaaata aagaagtga tgatggatga aaataatagt 1320  
 gaaataagaa agaaggtaaa ggaaatgaaa gaaaagagta gggctgcaat gtctgagaat 1380  
 ggatcatctt ataattcatt ggcgaagcta tttaggaaa ttatg 1425

.....(Omitted).....

<210> 70

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<211> 30

<212> DNA

<213> Artificial sequece

<220>

<223> synthesized nucleotides

<400> 70

tccgtcgaca agcttgcggc cgcactcgag

30

[Appendix 2]

### **The Old Patent Act**

#### **Article 52 (Divisional Patent Applications)**

(1) An applicant who has filed a single patent application for two or more inventions may divide the application into two or more applications within the scope of the features described in the specification or drawings accompanying the initial patent application, within either of the following periods:

1. A period during which amendments can be made under Article 47 (1);

2. A period during which a trial can be requested under Article 132-3 after a certified copy of the ruling to reject the claim of a patent is served.

#### **Article 201 (Translation of International Patent Applications)**

(1) An applicant who has filed an international patent application in a foreign language shall submit to the Commissioner of the Korean Intellectual Property Office a Korean translation of the specification, scope of claims, drawings (only the text matter therein) and abstract filed on the international filing date within two years and seven months from the priority date (hereinafter referred as "priority date") as defined in Article 2 (xi) of the Patent Cooperation Treaty (hereinafter referred to as "period for submitting domestic documents"): Provided, That in cases where the said applicant has amended the claims under Article 19(1) of the Patent Cooperation Treaty, he/she may substitute a Korean translation of the amended claims for the Korean translation of the claims filed on the international filing date.

(2) If the translations of the specification and claims under paragraph (1) have not been submitted within the period for submitting domestic documents, the international patent application shall be deemed to have been withdrawn.

(3) An applicant who has submitted the translation referred to in

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paragraph (1) may submit a new translation to replace the prior translation within the period for submitting domestic documents: Provided, That this shall not apply where the applicant has made a request for examination.

(4) Matters stated in the specification, claims and text matter of drawings of an international patent application filed on the international filing date, but not stated in the translation under paragraph (1) or (3) (hereinafter referred to as "translated version") submitted within the period for submitting domestic documents (or the date of the request for examination where the applicant has made such request within the said period; hereinafter referred to as "reference date") shall be deemed not to have been stated in the specification and claims of the said international patent application filed on the international filing date or deemed to have no text in the drawings of such application

(5) An application of an international patent application submitted on the international filing date shall be deemed an application submitted under Article 42(1).

(6) The translated version of the specification, scope of claims, drawings and abstract of an international patent application (the specification, scope of claims, drawings and abstract submitted on the international filing date, in cases of an international patent application made in the Korean language) shall be deemed the specification, drawings and abstract submitted under Article 42(2).

### **Article 202 (Special Provisions on Priority Claim by Patent Application, etc.)**

(1) Articles 55(2) and 56(2) shall not apply to an international patent application.

(2) In applying Article 55(4), "specification or drawings initially attached to the earlier application" shall be construed as "specification, scope of claims or drawings (only text matter thereof) submitted on the international filing date under Article 201(1), and the translated version of the said documents under Article 201(4) or drawings

(excluding the text matter thereof) of the international application submitted on the international filing date", and "laying open for public inspection" shall be construed as "international publication under Article 21 of the Patent Cooperation Treaty."

**Article 203 (Submission of Documents)**

(1) An applicant for an international patent shall submit to the Commissioner of the Korean Intellectual Property Office a document stating the following matters within the period for submitting domestic documents. In such cases, an applicant who has filed an international patent application in a foreign language shall submit a Korean translation under Article 201(1), together with such document:

1. The name and domicile of the applicant (if the applicant is a juristic person, its title and location of place of business);

2. The name and domicile or place of business of the representative, if any (if the representative is a patent corporation, its title, location of office and designated patent attorney's name);

3. Deleted;

4. The title of the invention;

5. The name and domicile, or place of business of the inventor;

6. The international filing date and the international application number.

(2) The Commissioner of the Korean Intellectual Property Office shall, in any of the following cases, order an amendment thereto designating a deadline:

1. Where a document under the former part of paragraph (1) is not submitted within the period for submitting domestic documents;

2. Where a document submitted under the former part of paragraph (1) is in violation of the formalities as specified by this Act or by an order made by this Act.

(3) Where a person who receives an order for amendment under paragraph (2) fails to make such amendment within the designated deadline, the Commissioner of the Korean Intellectual Property

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Office may invalidate the international patent application concerned.

### **Article 208 (Special Provisions on Amendment)**

(1) Notwithstanding Article 47(1), no amendment (excluding an amendment under Articles 204(2) and 205(2)) to an international patent application shall be made unless all the following requirements are satisfied:

1. Official fees pursuant to Article 82(1) shall be paid;
2. The Korean translation pursuant to Article 201(1) shall be submitted: Provided, That this shall not apply to an international patent application filed in the Korean language;
3. The reference date shall have passed (where the reference date is the date of request for an examination of application, referring to the time of filing a request for examination of application).

(2) Deleted

(3) With regard to the scope of an amendment made to an international patent application filed in a foreign language, "features stated in the specification or drawings initially attached to the patent application" in Article 47(2) shall be construed as "features stated in a translation of the specification, scope of claims or drawings (only the text matter therein), or the features stated in the drawings (excluding the text matter therein), in the international patent application submitted on the international filing date."

### **The Old Enforcement Rules of the Patent Act**

#### **Article 21 (Written Patent Application, etc)**

- (1) Any person who intends to file a patent application under Article 42(1) of the Act shall submit to the Commissioner of KIPO appended Form 14-Patent application, attaching thereto the following documents:
1. One (1) copy of the specification, summary, and drawing;
  2. One (1) copy of a document verifying the right of agency in the event that an agent performs the procedures
  3. One (1) copy of other certificates under laws and regulations

(2) The specification, summary, and drawing under Paragraph (1) shall be prepared in appended Form 15, 16, and 17, respectively.

**Article 21-2 (International Patent Application Including Nucleic or Amino Acid Sequence)**

(1) Any person who files a patent application including nucleic sequence or amino acid sequence (hereinafter, the "Sequence") shall write down the Sequence List (hereinafter, the "Sequence List") prepared in a way prescribed by the Commissioner of KIPO on a specification and prepare an electronic file (hereinafter, the "Sequence List Electronic File") that containing the Sequence List in a way prescribed by the Commissioner of KIPO and attach the Sequence List Electronic File to the specification; Provided, That in cases where the Sequence List Electronic File prepared in a way prescribed by the Commissioner of KIPO is written down on the specification, the Sequence List Electronic File may not be attached.

(2) Paragraph (1) shall be applied mutatis mutandis to the amendment to a patent application including the Sequence.

**The Old Regulations under the PCT**

**5.2 Nucleotide and/or Amino Acid Sequence Disclosure**

(a) Where the international application contains disclosure of one or more nucleotide and/or amino acid sequences, the description shall contain a sequence listing complying with the standard provided for in the Administrative Instructions and presented as a separate part of the description in accordance with that standard.

(b) Where the sequence listing part of the description contains any free text as defined in the standard provided for in the Administrative Instructions, that free text shall also appear in the main part of the description in the language thereof.

**49.5 Contents of and Physical Requirements for the Translation**

## PATENT COURT DECISIONS

(a) For the purposes of Article 22, the translation of the international application shall contain the description (subject to paragraph (a-bis)), the claims, any text matter of the drawings and the abstract. If required by the designated Office, the translation shall also, subject to paragraphs (b), (c-bis) and (e),

(i) contain the request,

(ii) if the claims have been amended under Article 19, contain both the claims as filed and the claims as amended (the claims as amended shall be furnished in the form of a translation of the complete set of claims furnished under Rule 46.5(a) in replacement of all the claims originally filed), and

(iii) be accompanied by a copy of the drawings.

(a-bis) No designated Office shall require the applicant to furnish to it a translation of any text matter contained in the sequence listing part of the description if such sequence listing part complies with Rule 12.1(d) and if the description complies with Rule 5.2(b).

[Appendix 3]

**Main Contents of the Patent Act Amended by Act No. 12753,  
Jun. 11, 2014**

Before amendment	After amendment
<p>Article 201 (Translation of International Patent Application) (6) The translated version of the specification, scope of claims, drawings and abstract of an international patent application (the specification, scope of claims, drawings and abstract submitted on the international filing date, in cases of an international patent application made in the Korean language) shall be deemed the specification, drawings and abstract submitted under Article 42(2).</p>	<p>Article 200-2 (Applications, etc. Substituted by International Patent Applications) (2) A description of an invention, claims, and drawings submitted by the international filing date of an international patent application shall be deemed the specification and drawings initially accompanying a patent application filed under Article 42(2).</p>
<p>Article 208 (Special Provisions on Amendment) (3) With regard to the scope of an amendment made to an international patent application filed in a foreign language, "features stated in the specification or drawings initially attached to the patent application" in Article 47(2) shall be construed as "features stated in a translation of the specification, scope of claims or drawings (only the text matter therein), or the features stated in the drawings (excluding the text matter therein), in the international patent application submitted on the international filing date."</p>	<p>Article 208 (Special Provisions concerning Amendments) (3) When the former part of Article 47(2) applies to the amendable scope of an international patent application filed in a foreign language, "specification or drawings accompanying the initial patent application" shall be construed as "description of the invention, the scope of claims, or drawings, submitted by the international filing date."</p>
<p>(Newly inserted)</p>	<p>Article 208 (Special Provisions</p>

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	<p>concerning Amendments)</p> <p>④ Where the latter part of Article 47(2) applies to the amendable scope of an international patent application filed in a foreign language, "patent application in a foreign language" shall be construed as "international patent application in a foreign language," and "final Korean translation (referring to the corrected Korean translation, if a correction is made under the former part of Article 42-3(6)) or in the drawings (excluding captions in the drawings) accompanying the initial patent application" as "final Korean translation under Article 201(5) (referring to the corrected Korean translation, if a correction is made under the former part of Article 201(6)) or in the drawings (excluding captions in the drawings) submitted by the international filing date", respectively.</p>
<p>Article 29 (Requirements for Patent Registration)</p> <p>(4) In applying paragraph (3), where another patent application or a utility model registration application falls under any of the following subparagraphs, "laid open" in paragraph (3) shall be construed as "laid open for public inspection or internationally published pursuant to Article 21 of the Patent Cooperation Treaty", and "invention or device described in the specification or drawings initially attached to another patent application or a utility model</p>	<p>Article 29 (Requirements for Patent Registration)</p> <p>(5) For the purposes of paragraph (3), if a separate patent application is an international patent application defined in Article 199(2) (including an international application deemed a patent application under Article 214(4)), "specification or drawings initially accompanying a separate patent application" in the main body of paragraph (3) shall be construed as "specification, the claims, or drawings submitted by the international application date," and</p>

Scope of Divisional Patent Application Case

<p>registration application" shall be construed as "invention or device described in the specification, claims or drawings submitted on the international filing date" if it is applied for in the Korean language, and shall be construed as an "invention or device described in the specification, claims or drawings submitted on the international filing date and the translated version of the said documents" if it is applied for in a foreign language: Where another patent application is an international application which is deemed a patent application pursuant to Article 199(1) (.....);</p>	<p>"laid open" in subparagraph 2 of the aforesaid paragraph as "laid open or published internationally under Article 21 of the Patent Cooperation Treaty", respectively.</p>
<p>(Newly inserted)</p>	<p>(7) For the purposes of paragraph (3) or (4), no international patent application deemed withdrawn under Article 201(4) or an application for registration of a utility model deemed withdrawn under Article 35(4) of the Utility Model Act shall be deemed either a separate patent application or another application for registration of a utility model.</p>

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**Comparison Table**

		Translation (Existing PCT)	Original (Amendment)	
Legal matters	Whether a Korean translation could be amended	No	Correction of mistranslation possible	
	Violation of amendment scope	Examination (rejection)	Korean translation	Common in original and Korean translation
		Trial (invalidation)	Original and Korean translation	Original
	Scope of correction after patent	Korean translation	Original	
	Scope of division or modification	Korean translation	Original	
	Extended invention to be filed first	Common in original and Korean translation	Original	
Country		Korea	U.S., Japan, EPO, China, U.K., etc.	

**PATENT COURT OF KOREA**  
**FIFTH DIVISION**  
**DECISION**

**Case No.** 2020Heo7333 Scope of Rights  
Confirmation (Patent)

**Plaintiff** A Co., Ltd.  
CEO B  
Counsel for Plaintiff  
Patent Attorney Hoon Jung

**Defendant** C Co., Ltd.  
CEO D, E  
Counsel for Defendant  
Shinsegi Lawfirm  
Patent Attorneys Jongyoon Kim,  
Daehyeong Lee

**Date of Closing Argument** May 27, 2021

**Decision Date** July 22, 2021

**ORDER**

1. The plaintiff's claim is dismissed.
2. The cost arising from this litigation shall be borne by the plaintiff.

**PLAINTIFF'S DEMAND**

The IPTAB Decision 2019Dang1660, decided October 30, 2020,

shall be revoked.

## OPINION

### 1. Background

#### A. Patented Invention at Issue (hereinafter, the “subject invention”) (Plaintiff’s Exhibits 2 and 3)

1) Title of Invention: Lighting Method and Device Utilizing Beam Spots for Landscape Lighting

2) Application Date/ Date of Registration/ Registration number: November 16, 2009/ March 13, 2012/ No. 1128409

3) Patentee: Plaintiff

4) Claims

**[Claim 1]** A lighting device utilizing beam spots for landscape lighting, comprising: a housing; a beam generation module, characterized in that, the beam generation module is installed inside the housing and has a substrate on which light source units including at least one or more laser diodes are installed; a head unit, characterized in that the head unit includes a beam splitting unit to be installed on a front of the beam generation module and split and irradiate a beam generated from the beam generation module; and a projection screen, characterized in that, the projection screen projects a light irradiated from the head unit and split and has a plurality of unit projections which sway by the movement of air current and are positioned at different distances from the head unit, wherein each unit projection has a different color and a relatively wide leaf surface so that a support member and a beam spot can be

formed and each unit projection is split by cut groove to invigorate the sway caused by air current. (hereinafter, the “Invention in Claim 1 at Issue”; the same shall apply to the remaining claims)

**【Claims 2, 4, 6, and 7】** (Deleted)

**【Claim 3】** The lighting device utilizing beam spots for landscape lighting according to claim 1, further comprising: a drive unit, characterized in that, the drive unit is installed in a subframe and drives a first driven pulley and a second driven pulley, wherein the beam splitting unit installs a support frame on a subframe of a head unit; wherein a first driven pulley on which a first hollow portion is formed so that a light irradiated from a laser diode of the beam generation module passes through is installed rotatable on the support frame; wherein a second driven pulley which has a support to be inserted into the first hollow portion of the first driven pulley and on which a second hollow portion is formed so that a beam irradiated from the laser diode passes through is installed rotatable wherein a first beam splitting lens that blocks an end of the first hollow section is installed on an end of the first driven pulley; and wherein a second beam splitting lens is installed on an end of support of the second driven pulley to block an end of the second hollow portion.

**【Claim 5】** (Omitted)

## 5) Main Content of the Invention

### **Ⓐ Technical Field**

The present invention relates to a lighting method and a lighting apparatus, and more particularly, a lighting method and an apparatus thereof using a beam spot for landscape lighting that can light a landscape using a beam spot. ([0001])

### **Ⓑ Background Art**

In general, a landscape lighting apparatus of outdoor sports grounds, event halls, parks, roads, street trees, etc. has a structure in which a light

## PATENT COURT DECISIONS

source is installed at a relatively high position or on the ground to illuminate. Particularly, in case of the event hall, the viewer's eyes are focused by blinking or dividing the light source and irradiating a specific area. ([0002])

At the event hall, the lights will flash or change colors to match the surrounding music or event atmosphere. Such lighting apparatus include techno lamps, laser beams, moving arts, psychedelic, beam lights, etc. Among these lighting apparatus, the laser beam is distributed in various forms such as linear, circular, rectangular, etc. and used together with other lighting. ([0003])

Korean Utility Model Registration No. 20-0440157 discloses a karaoke lighting device using a laser beam. The disclosed karaoke lighting device has a plurality of motors and a plurality of laser beams to create an appropriate atmosphere in response to sound and singing sounds according to the oscillator, and at the same time, various patterns of patterns are displayed in real time according to sound and beat with a single machine. ([0004])

Since a lighting device using this laser beam is irradiated to a fixed wall surface or a ceiling, it is difficult to have a three-dimensional illumination. ([0005])

Japanese Patent Publication No. 2006-323006 discloses a laser illuminator and a decoration, and Japanese Patent Publication No. 2000-294018 discloses a lighting apparatus. This lighting apparatus is provided with a curved reflector at the lower part of the irradiating apparatus, and has a structure to irradiate a light to a predetermined area by irradiating a light source on the ground with the reflector. A lighting apparatus having such a technical configuration can irradiate a light in a wide area such as, event hall, performance hall, etc., but it is difficult to implement lively lighting because the reflector has a relatively fixed structure. ([0006])

Meanwhile, Japanese Patent Publication No. 2001-108907 discloses an illumination method using a laser light source, and Japanese Patent Publication No. 1992-356188 discloses a street tree lighting apparatus. The street tree lighting apparatus has a configuration in which the lighting apparatus is installed on the top of the upright member of the support. ([0007])

The lighting apparatus configured as described above may illuminate

by irradiating light at event, street tree, etc., but it is difficult to expect a dynamic effect for such lighting. ([0008])

**© Problem to Be Solved**

The present invention is to solve the problems described above and an object of the present invention is to provide a lighting method and apparatus using a beam spot for landscape lighting that can improve the dynamic characteristics of the lighting, such as an event hall, street trees, etc. ([0009])

Another object of the present invention is to provide an illumination method and apparatus using a beam spot for landscape lighting that can implement the flashing of the beam by shaking the unit screen. ([0010])

**① Solution to The Problem**

In order to achieve the above object, a beam spot lighting apparatus according to the present invention includes a beam generation module having a substrate on which light source units including at least one laser diode are installed, a head installed at the front of the beam generation module and including a beam separation part for dividing and irradiating a beam generated from the beam generation module, and a projection screen, as a light irradiated and divided from the head is projected, swaying by the movement of airflow and having a plurality of unit projections located at different distances from the head. ([0011] to [0012])

In the present invention, each of the unit projection is made of different colors, and a cut groove is formed so that the unit projection is divided into two or more and thus is able to move independently. And the head is supported by a separate angle adjustment unit installed on the support and can adjust the irradiation direction. ([0013] to [0014])

Alternatively, the beam spot lighting apparatus of the present invention for achieving the above object is provided with a light emitting diode on one side of the barrel having a hollow, a light source unit being installed in the barrel and having optical lenses for focusing the light irradiated from the light emitting diode, beam generation modules having a substrate on which the light source units are installed, a head on which the rotatable beam generation module is installed, a driving unit installed at the head to rotate the beam generation module forward and backward, and a projection screen having a plurality of unit projections installed at different distances from the head and swaying by the movement of airflow. ([0015] to [0017])

In the present invention, the head adjacent to a floodlight window further has a shutter portion for intermitting the irradiation of light on the front of the beam generation module, and the head is supported by a support bracket on the support. ([0018])

**Ⓔ Effect of Invention**

An illumination method using the beam spot and the apparatus according to the present invention can provide 3D illumination by focusing the beams of the light emitting diode to irradiate unit projections shaken by the air to selectively irradiate the unit projections and implement various colors. In particular, since the beam is irradiated to the moving projection screen, that is, the unit projections at different distances from the illumination apparatus, the projected beam may be moved as the unit projections move. ([0019])

In addition, the illumination method and the apparatus using the beam spot according to the present invention can implement a three-dimensional beam pattern by irradiating a beam sequentially or simultaneously by being installed in a plurality in a predetermined area. In addition, the lighting apparatus can provide a natural sound or music, such as the sound of birds in the surroundings, inspire a natural atmosphere, and also be used as a landscape lighting apparatus because it can emit the lighting apparatus itself. ([0020])

**Ⓕ Details to Exploit Invention**

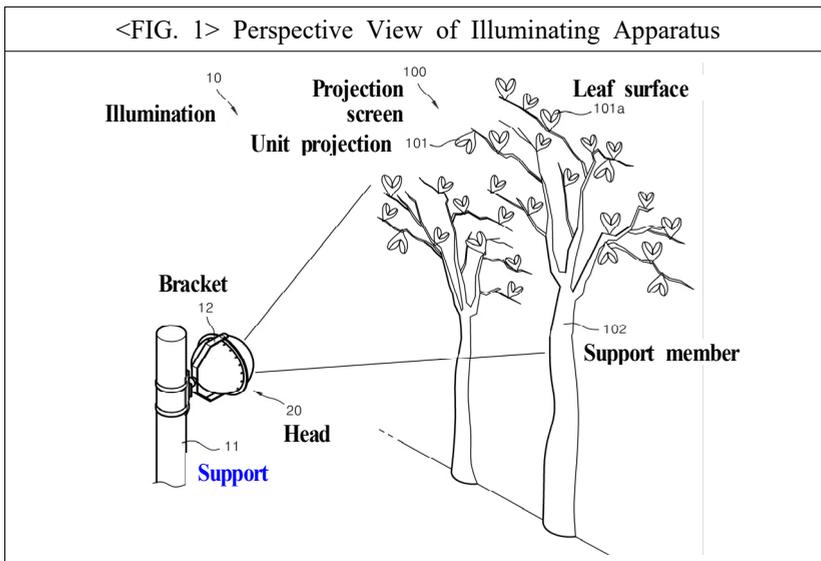
An illumination apparatus using a beam spot according to the present invention is to enable a three-dimensional illumination by irradiating a beam of various colors to the moving unit projection, an embodiment is illustrated in FIGs. 1 and 3. ([0021])

Referring to the drawings, the illumination apparatus (10) using the beam spot is supported by the angle-adjustable bracket (12) on the support (11) and provided with the projection screen (100) to be installed to be spaced apart from the head (20) for irradiating the beam spots. The support (11) has a height such that the beam spot irradiated from the head (20) does not affect the surrounding environment due to the irradiation. ([0022] to [0023])

The head (20) installed on the bracket (12) for irradiating beam spots includes a housing (22) having a floodlight window (21), a beam generation module (30) to be installed in a rotatable sub-housing (23) to

be installed in the housing (22), and a drive unit (24) to be installed in the housing (22) and to rotate the beam generation module (30). ([0024])

The beam generation module (30) includes a rotating substrate (31) installed in the housing (22) and a plurality of laser diodes (32) installed on the rotating substrate (31). In addition, a beam splitting unit (40) is provided for splitting the beam irradiated from the laser diode (32) on the front surface of the beam generation module (30). The beam splitting unit (40), as illustrated in FIGs 3 and 4, includes a first splitting lens (41) installed between the floodlight window (21) and the beam generation module (30) and a second rotatable splitting lens (42) installed relative to the first splitting lens (41). And, the second splitting lens (42) is rotated by a motor (42). A support of the second splitting lens (42) is installed to be able to rotate by a rotation member (42a) supporting the second splitting lens (42) on a fixing member (41a) supporting the first splitting lens (41) in the housing (22). The rotation member (42a) is rotated by the motor (43). Here, a rotational force of the motor can be transferred to the rotation member (42a) by a belt or a gear which is a power transmission means. ([0027])



On the projection screen (100), a light to be split is projected from the head, and is provided with a plurality of unit projections (101) which are swayed by the movement of an airflow and are positioned at different

distances from the head. The projection screen (100) is installed in the three-dimensional space, and includes a support member (102) and the unit projection (101) installed on the support member (102). The unit projection (101) consists of an elastic member that is elastically deformable with a small force, and can have a relatively wide leaf surface (101a) so that the beam spot can be easily formed. The unit projections (101) are installed alternately from each other so that the beam spots irradiated from the head can be formed at a different distance from the head. In addition, a cut groove (not illustrated) can be formed so that the unit projection (101) can be swayed smoothly. The projection screen is not only limited to the above embodiments but could be used in roadside trees, garden trees, building structures, sculptures, etc. ([0042])

The method using a lighting apparatus using the beam spot according to the present invention configured as stated above is as follows. ([0045])

In a state in which the head (20) is installed on the support (11) to be installed to face the projection screen (100), a beam spot is irradiated on the projection screen (100) through a floodlight window (21) from light source units (50) of the head (20). Here, the beam spots could form a relatively high beam with high density of light by focusing in multiple stages beams irradiated from a light emitting diode (53) on one side of barrel (52) using focusing lenses, which are optical lenses installed on the barrel (52). ([0046])

When the beam with high density is projected on the projection screen (100) as described above, the beam spots are respectively projected on the unit projection (101). Since each unit projection (101) is located at a different distance from the head, the projection pattern of the beam spot is maintained in the three-dimensional pattern. In this state, when an airflow, i.e. wind is applied to the projection screen (100), the unit projections (101) are swayed to move between the unit projections (101) or the adjacent unit projections. In particular, when the projection screen having a unit projection (101) is installed outdoors, when an airflow, such as wind, etc., is generated, each unit projection (101) may be swayed and an effect such as a star light may be expected. ([0047])

In case where a beam source of the head (20) is made of laser diode, as illustrated in FIGs. 3 to 7, the beam irradiated from the laser diode is split by the beam splitting unit (40 or 90) is irradiated to the projection screen (100). ([0049])

## **B. The Challenged Invention**

The challenged invention specified by the plaintiff relates to the “lighting creation device” and its description and drawings are as illustrated in the appendix.

## **C. Procedural History**

1) On May 31, 2019, the plaintiff petitioned, against the defendant, an affirmative confirmation trial for the scope of rights, arguing that “the challenged invention falls within the scope of rights in the inventions in claims 1 and 3 at issue.”

2) The IPTAB reviewed the above appeal by the plaintiff under Case No. 2019Dang1660 and issued an administrative decision to dismiss the appeal on October 30, 2020, on the ground that “as the challenged invention is not an invention practiced by the defendant, there is no need for the court to review the appeal by the plaintiff and thus the petition is unlawful.”

**[Factual basis]** Undisputed facts, statements in the plaintiff’s exhibits 1 through 5 and the defendant’s exhibit 3, the purport of the overall argument

## **2. Summary of Parties’ Arguments**

### **A. Plaintiff’s Arguments**

The challenged invention is identical to a practiced invention that the defendant contends to practice (hereinafter, the “asserted practiced invention”) and it clearly specifies a projection screen as the final destination so that the challenged invention can be compared with the

## **PATENT COURT DECISIONS**

subject invention. The projection screen in the challenged invention is not different from the asserted practiced invention in that it does not disclose the inclusion of natural terrain features and an artificial design.

### **B. Defendant's Arguments**

The challenged invention is not identical to the asserted practiced invention in that the challenged Element 4 in the asserted practiced invention does not have an element that corresponds to the “projection screen, characterized in that the projection screen has a support member which is a final destination (900) on which an image can be formed as a beam is irradiated from the first to third laser diodes, a wide leaf surface and a plurality of unit projections split by cut grooves to activate the sway by airflow.”

## **3. Whether the Plaintiff's Action to Confirmation of the Scope of Rights shall be Upheld**

### **A. Whether the Defendant Exploits the Challenged Invention**

#### 1) Relevant legal principles

Where a patentee petitions for an affirmative confirmation trial for the scope of rights, arguing that the challenged invention falls within the scope of rights in his/her patented invention and the identity between the challenged invention that a petitioner specifies and an invention practiced by a respondent is not acknowledged, even if it is decided that the challenged invention falls within the scope of rights in the patented invention, the action shall affect the challenged invention specified by the petitioner alone, not the invention practiced by the respondent. Hence, an affirmative scope of rights trial not practiced by

the respondent is unlawful since there is no need for the court to review the appeal and shall be dismissed (Supreme Court Decision 2002Hu2419, decided June 10, 2003). In this case, the identity of the challenged invention and an invention practiced by the respondent relates to the confirmation of whether the respondent exploits the challenged invention. Whether they have identical elements shall be acknowledged only when the two inventions seem to be identical from a factual point of view (Supreme Court Decision 2011Hu2626, decided October 25, 2012).

## 2) Discussion

### a) Elements of the Challenged Invention

The challenged invention specified by the plaintiff is composed of the elements in the following table (hereinafter, each element in the invention shall be referred to as the “challenged element”).

Element	The Challenged Invention
1	A case (200) whose front is opened
2	A beam irradiation means (300), characterized in that a heating film is installed on one side, a first and a second laser diodes (320, 330) are buried and installed and a radiator (360) is settled and fixed within the case (200) by installing a third laser diode (340) as facing toward the second laser diode with a bracket (350);
3	A beam splitter (400), characterized in that a beam irradiated from the third laser diode is refracted to be irradiated to the front by being installed to have a gradient of 45° to a bracket (410) installed on a front radiator of the third laser diode and a beam irradiated from the second laser diode is irradiated to the front by being transmitted in a straight line; A rotor (500), characterized in that the rotor has a central gear (520) connected to a motor (510) installed at a top of the beam irradiation mean, an auxiliary gear (530) connected to both sides of the central gear, a rotating gear (541) connected to each auxiliary gear, and a beam guide pipe (540) with a first beam splitting membrane (542) at the top and splits a beam irradiated from the first to third laser diode into a plurality of beams;

**PATENT COURT DECISIONS**

Element	The Challenged Invention
	<p>A fixing panel (600) characterized in that the fixed panel supports the rotator and has, on both sides, a hole (610) that passes a beam that passed the first beam splitting membrane (542);</p> <p>A lid (700), characterized in that the lid is installed at an opened entrance of the case and has a second beam splitting membrane (710) that second splits a beam irradiated from a first to third laser diodes which passed the hole (610);</p> <p>A controller (800), characterized in that the controller supplies and blocks a power source with the heating film, motor, and the first to third laser diodes and controls in various ways, with a remote controller, the image creation of beam to be irradiated from the first to third laser diodes;</p>
4	<p>A projection screen, characterized in that the projection screen has a support member which is a final destination (900) on which an image can be formed as a beam is irradiated from the first to third laser diodes, a wide leaf surface, and a plurality of unit projections split by cut grooves to activate the sway by airflow.</p>

b) Analysis

The challenged Elements 1 through 3 are all included in the defendant’s asserted invention, and there is no dispute over this matter. In light of the above evidence, the following facts or circumstances acknowledged by the plaintiff’s exhibit 6, etc., it may not be deemed, only with the evidence submitted by the plaintiff, that the defendant exploits the “projection screen, characterized in that the projection screen has a support member which is a final destination (900) on which an image can be formed as a beam is irradiated from the first to third laser diodes, a wide leaf surface and a plurality of unit projections split by cut grooves to activate the sway by airflow” in the challenged Element 4. Thus, it is difficult to view that the Invention for Review is identical to the Defendant’s asserted practiced invention from a factual point of view, and there is no other evidence to acknowledge the same.

(1) According to the description of the challenged invention

(refer to the appendix), an object of the challenged invention is to “create and diversely change an image type of beam created on a final destination when the beam is irradiated to the final destination.” Element 4 of the prior art is composed of “a support member which is a final destination on which an image can be formed as a beam is irradiated and a wide leaf surface and a plurality of unit projections split by cut grooves to activate the sway by airflow.” As to an effect of the challenged invention, the following is disclosed: “a second beam splitter membrane (710) is installed on the lid (700) to have a wide leaf surface and a support member which is the final destination by once again splitting a beam irradiated from a plurality of the first to third laser diodes split on the first beam splitting membrane (542) and to create numerous beam images on a projection screen having many unit projections split by cut groove to activate sway by airflow and to have a wide leaf surface and a support member which is the final destination by once again splitting a beam irradiated from a plurality of the first to third laser diodes split on the first beam splitting membrane and to create numerous beam images, in various forms, on a projection screen having many unit projections split by cut groove to activate sway by airflow.”

Thus, Element 4 in the prior art is to change the image types of a beam in various ways and thus shall be deemed to have these specific elements in light of the following facts: the challenged invention is designed to change the image types of beam in various ways with an element to split a beam from laser diodes with the first and second beam splitting membranes and the challenged Element 4, which has a wide leaf surface and a plurality of unit projections split by cut grooves; and the disclosure “split by cut<sup>1)</sup> groove to activate the sway by airflow” specifies an object of the element concerned.

Accordingly, of the drawings in the challenged invention, FIG. 4e

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1) The lexical meaning of cut is to “widen after cutting or splitting” (see F Korean dictionary).

## PATENT COURT DECISIONS

illustrates a tree shape as the final destination of the invention. However, it is difficult to deem that Element 4 in the prior art is illustrated to have “a wide leaf surface and a plurality of unit projections split by a cut groove.”

(2) The main content and drawing (Plaintiff’s Exhibit 6) of an asserted invention that the defendant submitted during the trial does not disclose an element compared with Element 4 of the prior art. As to its effect, the following is disclosed: “a second beam splitter membrane (710) is installed on the lid (700) to have a wide leaf surface and a support member which is the final destination by once again splitting a beam irradiated from a plurality of the first to third laser diodes split on the first beam splitting membrane (542) and to create numerous beam images on a projection screen having many unit projections split by cut groove to activate sway by airflow. As explained above, the lighting creation device installs and fixes red, blue and green laser diodes which are the three primary colors of the light, and when a beam is irradiated to the final destination, the beam images are changed and created diversely on the final destination.”

According to these disclosures, the defendant’s asserted invention is configured so that a beam irradiated from laser diodes is split by the first and second beam splitting membranes to display various images on the final destination and could change the image types of beam in various ways. However, it may not be deemed that the defendant’s asserted invention shows Element 4 in the prior art with a “wide leaf surface and a plurality of unit projections split by a cut groove.”

(3) The defendant’s web site contains, under the title a “Night View of Gwangyang Seo-cheon,” a picture of a tree illuminated by the lighting device installed by the defendant and a picture of a tree and lighting device installed by the defendant in Hanggyo-ri, Damyang-eup, Damyang-gun, Jeollanam-do (Plaintiff’s Exhibit 5). However, it could not be viewed that trees in these pictures are an element, which could change the image types of a beam in various ways as having the “wide leaf surface and a plurality of unit

projections split by a cut groove.” The trees illustrated in these pictures only have various shapes depending on the time of the year and their types as existing in nature. However, it may not be deemed that they have elements, such as the wide leaf surface and the unit projection split by cut groove as in Element 4 in the prior art. Also, it may not be viewed as an intentionally created element. Ultimately, even if the defendant’s lighting creation device is used for trees existing in nature, such as street trees, etc., it may not be viewed as an element identical to Element 4 in the prior art from a factual point of view.

## **B. Summary of Discussion**

The plaintiff’s petition for an affirmative scope of rights trial relates to the invention that may not be viewed as exploited by the defendant and thus it is unlawful as reviewing is not necessary. The IPTAB decision is consistent with the above analysis and shall be upheld.

## **4. Conclusion**

The plaintiff’s claim to revoke the IPTAB decision is without merit and is therefore dismissed.

Presiding Judge	Sungyop WOO
Judge	Hyounggeun LEE
Judge	Donggyu KIM

[Appendix]

**Explanatory Document on and Drawings of the Challenged  
Invention**

(as amended on October 20, 2020)

[Title]

Lighting Creation Device

[Purpose]

This intends the following: to be able to create and diversely change an image type of beam created on a final destination when the beam is irradiated to the final destination in a state in which laser diodes of red, green, and blue which are three primary colors are installed at a fixed position; to have the beam be irradiated in a stable manner by maintaining a temperature of the laser diodes to a certain degree by cooling and heating the same; and to be able to extend an useful life of the laser diodes.

[Technical Configuration]

A lighting creation device, comprising: a case (200) whose front is opened; a beam irradiation mean (300), characterized in that a heating film (310) is installed on one side, a first and a second laser diodes (320, 330) are buried and installed and a radiator (360) is settled and fixed within the case (200) by installing a third laser diode (340) as facing toward the second laser diode with a bracket (350); a beam splitter (400), characterized in that a beam irradiated from the third laser diode is refracted to be irradiated to the front by being installed to have a gradient of 45° to a bracket (410) installed on a front radiator of the third laser diode and a beam irradiated from the second laser diode is irradiated to the front by being transmitted in a straight line; a rotor (500), characterized in that the rotor has a central gear (520) connected to a motor (510) installed at a top of the beam irradiation mean, an auxiliary gear (530) connected to both sides of the central gear, a rotating gear (541) connected to each auxiliary gear,

and a beam guide pipe (540) with a first beam splitting membrane (542) at the top and splits a beam irradiated from the first to third laser diode into a plurality of beams; a fixing panel (600) characterized in that the fixed panel supports the rotator and has, on both sides, a hole (610) that passes a beam that passed the first beam splitting membrane (542); a lid (700), characterized in that the lid is install at an opened entrance of the case and has a second beam splitting membrane (710) that second splits a beam irradiated from a first to third laser diodes which passed the hole (610); a controller (800), characterized in that the controller supplies and blocks a power source with the heating film, motor, and the first to third laser diodes and controls in various ways, with remote controller, the image creation of beam to be irradiated from the first to third laser diodes; and a projection screen, characterized in that the projection screen has a support member which is a final destination (900) on which an image can be formed as a beam is irradiated from the first to third laser diodes, a wide leaf surface and a plurality of unit projections split by cut grooves to activate the sway by airflow.

[Effect]

In configuring the lighting creation device, the heating film (310) is installed on one side of a beam irradiation mean (300) and the first and second laser diodes (320, 330) are buried and installed on both side. A radiator (360) is configured that the third laser diode (340) is installed toward the second laser diode with a bracket (350) at the front. The radiator (360) is settled and fixed within a case (200) whose front is opened.

As stated above, the first and second laser diodes (320, 330) are buried and installed in a radiator (360) and the third laser diode (340) is fixed and installed with a bracket (350) to be able to minimize a damage to laser diodes by radiating a heat of laser diodes (320, 330, 340) generated as a beam is irradiated. Also, it is to have a beam of laser diodes be irradiated in a stable way and extend an useful life, in winter, by heating the laser diodes (320, 330, 340), if its temperature

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is too low.

It is desirable to maintain a temperature at a proper level, because a life of the laser diodes is shortened by heat damage and a beam would not be irradiated in a stable way, if a temperature is too low or high.

Also, the above laser diodes would not irradiate a beam in a stable way in winter when a temperature falls below zero. Thus, a radiator (360) is heated with a heating film (310) and the heat is transferred to the laser diodes to prevent the same.

Also, the radiator (360) radiates in a prompt and efficient way with a plurality of radiation pins (361). On both sides of front surface of the radiator (360), a support (362) is provided on which a fixing panel (600) is installed to support a rotor (500) explained below.

A beam splitter (400) is installed at a gradient of 45° to a bracket (410) installed on a front radiator (360) of the third laser diode (340) and has a beam irradiated from the third laser diode (340) be refracted to a front and a beam irradiated from the second laser diode (330) be irradiated to a front by passing straight.

A beam irradiated from the second laser diode (330) and a beam irradiated from the third laser diode (340) are irradiated using one beam splitter (400), because a distance of the beams irradiated from the second and third laser diodes (330, 340) becomes close and a distance between the beams irradiated from the second and third laser diodes (330, 340) and a beam irradiated from the first laser diode (320) becomes far distance. Thus, an effect of creation would be maximized by making distances among images to be created on a destination by being irradiated from the first to third laser diodes (320, 330, 340) to be irregular.

A rotor (500) has a central gear (520) connected to a motor (510) positioned at the top of the beam irradiation mean (300), an auxiliary gear (530) connected to both sides of the central gear, and a rotation gear (541) connected to each auxiliary gear. As the rotor is composed of beam guide pipes (540) as installing a first beam splitting membrane (542) at the top and rotates as splitting a beam irradiated

from the first to third laser diodes into a plurality of beams.

As stated above a central gear (520), an auxiliary gear (530) and a beam guide pipe (540) are accommodated in a protection case (550) and thus protected. Also, a noise that is generated as teeth of gears are inter-locked and rotated is minimized.

A first beam splitter membrane (542) is installed at the top of the beam guide pipe (540) to create a plurality of images on the final destination by splitting a beam irradiated from the first to third laser diodes (320, 330, 340) into a plurality of beams. An auxiliary gear (530) is installed on both sides of a central gear (520) connected to the motor (510) and a beam guide pipe (540) on which a rotation gear (541) is installed is installed in each auxiliary gear to rotate the first beam splitting membranes (542) on both side to the same direction, which split a beam irradiated from the first to third laser diodes (320, 330, 340).

A fixing panel (600) has a hole (610) on both sides to support and fix a protection case (550) which composes the rotor (500). The hole is to pass a beam that passes the first beam splitting membrane (542). Also, a protection case (550) that uses the fixing panel (600) is supported and fixed with a fixing piece to both sides of the protection case (550) as illustrated in FIG. 4. And a rotor (500) is stably supported by fixing an upper part of support (362) and a protection case (550) with fixing pieces.

A lid (700) is installed at an opened entrance of the case (200) and has a second beam splitter membrane (710) to have a beam irradiated from the first to third laser diodes be splitted further and pass through a hole (610).

A second beam splitter membrane (710) is installed on the lid (700) to have a wide leaf surface and a support member which is the final destination by once again splitting a beam irradiated from a plurality of the first to third laser diodes split on the first beam splitting membrane (542) and to create numerous beam images on a projection screen having many unit projections split by cut groove to activate sway by airflow.

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A controller (800) supplies and blocks a power source with the heating film (310), motor (510), the first to third laser diodes (320, 330, 340) and creates and controls, in various ways, an image of beam irradiated from the first to third laser diodes with remote controller (R). The types of embodiment in which the image is created in various ways could, as illustrated in FIG. 4a to 4d, change in various ways, such as a specific shape is created as each image is dispersed or converged, the shape is continuously and repeatedly displayed or flashed with different speeds, etc.

The shape of image is created and changed by the button manipulation of remote controller. If required, only one, two, or more beam colors irradiated from the first to third laser diodes (320, 330, 340) could be displayed by manipulating red (R), green (G), or blue (B) button in the remote controller (R). In addition, the beam display hours could be controlled to 2h, 4h, 6h, or 8h with buttons of remote controller (R).

It is desirable to form a cover (700) to be opaque so that a beam could not penetrate a part in which a second beam splitting membrane (710) is not installed. Also, a fixture (210) with joint (220) is installed on one side of the rear of the case (200) to adjust an angle of case to control an angle of beam to be irradiated from the first to third laser diodes (320, 330, 340). Thus, the case (200) can be installed and fixed firmly to an intended place.

Also, a thermometer sensor is installed in the case (200) and thus a temperature of the inside of the case is measured. If a measured temperature is equal to or less than a set temperature, the first to third laser diodes are protected by heating a radiator (360) using a heating film (310).

As explained above, the lighting creation device installs and fixes red, blue and green laser diodes which is three primary colors of the light and, when a beam is irradiated to the final destination (900), the beam images are changed and created diversely on a projection screen having a plurality of unit projections having a wide leaf surface and a support member which is the final destination (900) and splitted by cut

groove to activate the sway by airflow. Also, it is cooled by radiating a heat from laser diodes generated as the beam is irradiated and if a temperature of the laser diodes is too low in winter, a beam of laser diodes is irradiated in a stable way by heating and its useful life could be extended.

[Brief Explanation of Drawings]

FIG. 1 is an exploded perspective view of the lighting creation device.

FIG. 2 is a combined perspective view of the lighting creation device.

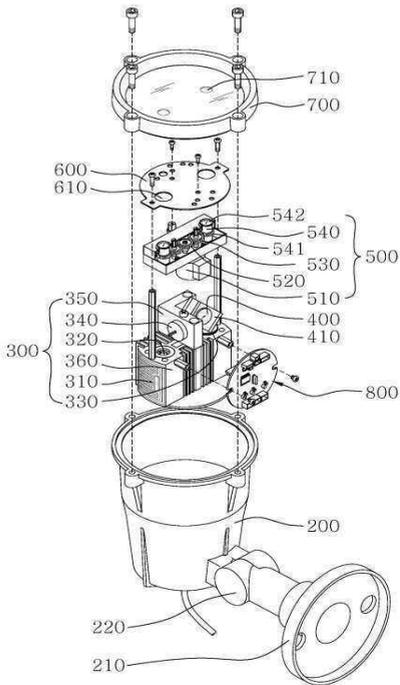
FIG. 3 is a combined cross-sectional view of the lighting creation device.

FIGS. 4a to 4e are photos of embodiment that shows an image creation on the final destination of beam created by the lighting creation device.

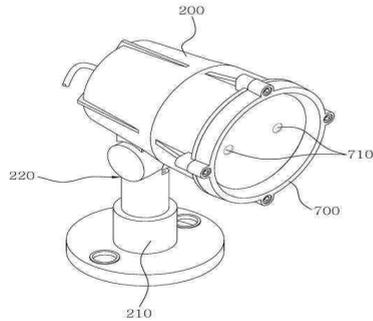
FIG. 5 is a control block diagram to create an image of the beam irradiated from the lighting creation device.

[Drawings]

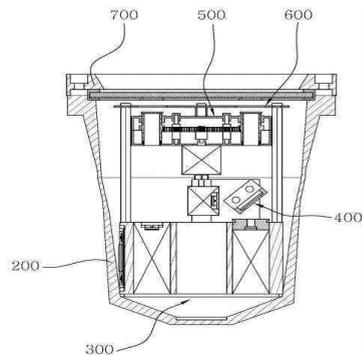
[FIG. 1]



[FIG. 2]

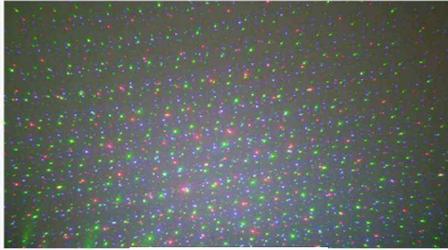


[FIG. 3]



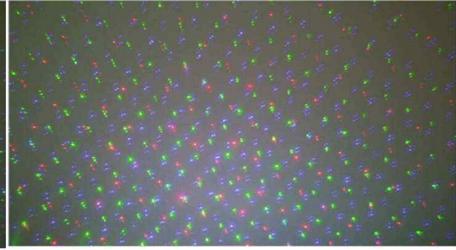
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[FIG. 4a]



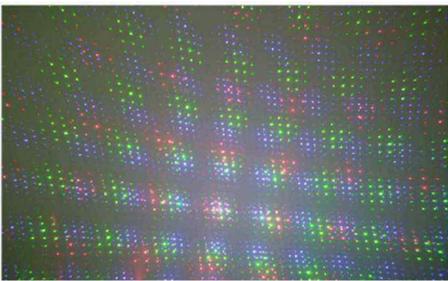
Final destination

[FIG. 4b]



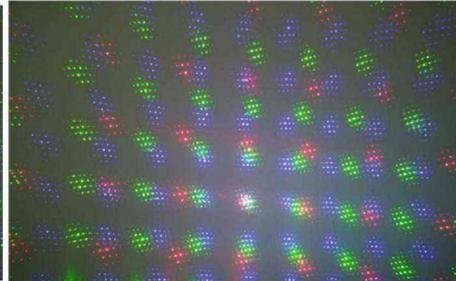
Final destination

[FIG. 4c]



Final destination

[FIG. 4d]



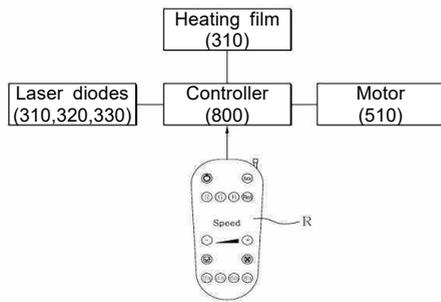
Final destination

[FIG. 4e]



Final destination

[FIG. 5]



**PATENT COURT OF KOREA  
TWENTY-SECOND DIVISION  
DECISION**

**Case No.** 2021Na1008 Request for  
Compensation for Employee's  
Invention

**Plaintiff-Appellant, and Appellee** A  
Counsel for Plaintiff  
Lawyer Junhyo Kim

**Defendant-Appellee, and Appellant** B Co., Ltd.  
CEO C  
Counsel for Defendant  
Lawyers Sangwook Han,  
Chunsu Lee, Jongmin Lee

**District Court's Decision** Seoul Central District Court  
Decision, 2018Gahap563160,  
dated December 11, 2020

**Date of Closing Argument** October 27, 2021

**Decision Date** November 26, 2021

**ORDER**

1. The portion of the lower court's decision that ruled against the defendant shall be revoked, and the plaintiff's claims corresponding to the revoked part shall be dismissed.
2. The plaintiff's appeal is dismissed.
3. Any cost arising from this litigation shall be borne by the plaintiff.

## **PLAINTIFF'S DEMAND and APPELLANT'S DEMAND**

### **1. Plaintiff's Demand**

The defendant is ordered to pay the plaintiff KRW 500,000,000 and the interest calculated therefore as follows: at an annual rate of 5% from August 04, 2014, to the date on which a duplicate of the complaint was served; and at an annual rate of 12% from the day following the date of service to the date on which any money owed is paid in its entirety.

### **2. Appellant's Demand**

[Plaintiff]

The portion of the lower court's decision against the plaintiff ordering additional payment shall be revoked. The defendant shall pay the plaintiff KRW 198,598,200 and the interest calculated therefore as follows: at an annual rate of 5% from August 04, 2014, to December 11, 2020; and at an annual rate of 12% from December 12, 2020, to the date on which any money owed is paid in its entirety.

[Defendant]

As ordered.

## **OPINIONS**

### **1. Basic Facts**

#### **A. Status of the Parties**

1) On August 25, 2003, the plaintiff joined the defendant as a researcher. From August 05, 2003, to December 07, 2014, the plaintiff worked as a senior researcher and a leading researcher at the

Passenger Diesel Engine Test Team and conducted engine test research, engine performance testing, P/T test development, etc. Further, from the following day up to the present, the plaintiff has worked as a leading researcher in the intelligence safety research team.

2) The defendant is a company that manufactures and sells various vehicles and components thereof.

### **B. Defendant's Development and Mass Production of A2 (EURO 5) Engine and DPF**

1) Around 2008, the defendant undertook to develop the engine A2, which is an automobile engine, in preparation for the EURO 5 Regulations (hereinafter, the "Engine A2 at Issue"). The plaintiff also participated in the research, and in June 2011, the development of the engine had been completed. After the complement of the development of the engine, the Engine A2 at Issue was mass-produced until July 2016 and installed in the Starex, Porter 2, and Bongo 3 vehicles.

2) The Engine A2 at Issue is equipped with a Diesel Particulate Filter (DPF) to remove particulates due to combustion in the engine.

### **C. Patent Application and Registration of the Defendant**

On May 13, 2014, the plaintiff submitted to the defendant a proposal for an invention titled "method of exiting and maintaining regeneration for improving durability of DPF when idling regeneration"<sup>1)</sup> (Defendant's Exhibit 13). On this basis, the defendant filed an application and registered a patented invention (hereinafter, the "**Subject Invention**"; the plaintiff refers to it as the "Employee's Invention at Issue," arguing that it is his/her own invention) as follows:

1) Title of Invention: Method and System of Maintaining

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1) This is called "Idle" in Korean and means a no-load operation.

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### Regeneration for Improving Durability of DPF

2) Filing Date of Application/ Date of Registration/ Registration Number: August 04, 2014/ December 01, 2015/ No. 1575513

3) Patentee: Defendant

4) Inventors: Plaintiff, D, E, F, G, H, I, J

5) Claims

**[Claim 1]** A method of maintaining regeneration for improving durability of a diesel particulate filter (DPF), comprising: determining whether a vehicle enters an idle state during the DPF regeneration; a first controlling of a concentration of oxygen introduced into the DPF to be equal to or less than a first reference value when a vehicle enters the idle state; and performing the regeneration process until a soot mass in the DPF is equal to or less than a target reference value, determining whether the vehicle entered the idle state during the DPF regeneration, and comparing the soot mass in the DPF and a reference value when the vehicle enters the idle state, wherein a second controlling is additionally included so that a concentration of oxygen introduced into the DPF is controlled to be equal to or less than a second reference value, where the soot mass in the DPF exceeds the reference value.

**[Claim 2], [Claim 3]: Deleted**

**[Claim 4]** The method of maintaining regeneration for improving durability of a DPF according to claim 1, wherein the concentration of oxygen introduced into the DPF is controlled by using a shutoff valve installed in a front of an engine.

**[Claim 5]** A system of maintaining regeneration for improving durability of a DPF, comprising: the DPF capturing soot captured in exhaust gas; and a controller receiving a signal about

whether a vehicle is currently in an idle state and maintaining the regeneration in the idle state of the vehicle until a soot mass in the DPF reaches a target reference value to prevent the DPF from reaching a limit temperature and a limit temperature gradient, wherein the controller receives a signal about whether a vehicle is currently in an idle state and maintains the regeneration until a soot mass in the DPF reaches a target reference value by controlling a concentration of oxygen introduced into the DPF to be equal to or less than a first reference value and determines whether a soot mass in the PDF is more than the reference value after receiving a signal about whether a vehicle is currently in an idle state and wherein a concentration of oxygen introduced into the DPF is controlled to be equal to or less than a second reference value and thus the regeneration is maintained until a soot mass in the PDF reaches to a target reference value, where the soot mass in the DPF exceeds the reference value.

**[Claim 6] to [Claim 8]: Deleted**

**[Claim 9]** The system of maintaining regeneration for improving durability of the DPF according to claim 5, wherein the concentration of oxygen introduced into the DPF is controlled by using a shutoff valve installed in a front of an engine.

#### 6) Main Content and Drawings of the Subject Invention

The main content and drawings of the Subject Invention are as disclosed in the [Appendix].

#### **D. Receipt of Compensation for Employee's Invention by the Plaintiff**

Before and after the filing of the Subject Invention, the plaintiff received from the defendant KRW 18,750 and KRW 37,500 on May

## PATENT COURT DECISIONS

23, 2014, and October 24, 2014, respectively, as compensation for the employee's Invention.

### **E. Ideas for DPF Regeneration and the Defendant's Engines**

1) As to the DPF regeneration, the technical ideas discussed in this case are as follows:

a) A: Control of a concentration of oxygen when entering an idle state during DPF regeneration

b) B: Dualization of a concentration of oxygen depending on a soot mass

c) C: Exiting from DPF regeneration after a certain amount of time elapses without preconditions when entering an idle state during DPF regeneration

d) C': Exiting from DPF regeneration after a certain amount of time elapses in a state where a temperature at the front end of the DPF is equal to or less than a certain temperature irrespective of an idle state

e) D: Ending of DPF regeneration, if a remaining soot mass becomes equal to or less than a certain value

2) Before mass-producing the Engine A2 at Issue, the defendant produced J engines in large volume in September 2008 and R engines in September 2010. The technical ideas applied to each engine are as stated below. In this respect, C, C', and D are technical ideas related to under what circumstances the DPF regeneration would be ended.

a) Engine J: A+C'+D

b) Engine R: A+B+C+D

c) Engine A2 at Issue: A+B+C'+D

**【Factual Basis】** Undisputed facts, each statement in the plaintiff's exhibits 1, 3, 5, 6, 11, 12, 20, and 24 to 26 (including exhibits with branching numbers; hereinafter, the same shall apply) and the defendant's exhibits 6, 8, 13, and 14, and the summary of the pleadings in their entirety

## **2. Parties' Arguments**

### **A. Plaintiff**

1) The plaintiff studied DPF technology independently in the subject Engine A2 Research Group. As a result, the plaintiff completed the Subject Invention, which excludes the application of C or C' idea when entering an idle state during DPF regeneration, as an employee's invention, and succeeded a right to receive the patent, etc., therefore to the defendant.

2) The disclosure of "exceed" in Claims 1 and 5 of the Subject Invention is merely a mistake in writing. Further, the defendant made an exclusive and monopolistic profit by mass-producing and selling vehicles equipped with the Engine A2 at Issue in which the Subject Invention was practiced. Hence, the defendant is liable to pay the plaintiff a reasonable amount of compensation regarding the employee's invention. Even if the disclosure of "exceed" in each claim is not a mistake in writing, the defendant shall pay the plaintiff a reasonable compensation of profits attributable to the reservation of filing of the application.

### **B. Defendant**

1) The defendant had already developed the engine R, which embodied the technical ideas of the Subject Invention before the

## **PATENT COURT DECISIONS**

Engine A2 at Issue was developed. The plaintiff developed the Engine A2 at Issue by simply applying the technical ideas of the engine R without change, and the technical ideas of the Subject Invention were already disclosed in the relevant technical field. The plaintiff did not develop the engine A2 in a control method but only performed the “calibration” that finds and maps, through experimentation, definite values, such as an air-fuel ratio, etc., to be applied to DPF regeneration logic that the defendant developed through a contractor. Hence, the plaintiff did not invent the Subject Invention as the employee’s invention.

2) The removal of the idea C that the plaintiff argues was not included in the Subject Invention and the DPF logic that does not include the idea C was already developed for the engine J, which the defendant developed before developing the engine A2. The idea C’ works under certain conditions irrespective of idle state and is not related to the Subject Invention separately from the idea C. Also, the defendant did not remove the idea C’ from the engine A2.

3) Even if it is deemed that the plaintiff completed the Subject b Invention as an employee’s invention, the disclosure of “exceed” in Claims 1 and 5 of the Subject Invention may not be viewed as a mistake in writing “less than.” Hence, the Subject Invention was not practiced in the defendant’s engine A2, and the defendant has never made a monopolistic and exclusive profit therefrom.

### **3. Whether a Liability to Pay Compensation for Employee’s Invention Arises**

#### **A. Discussion of Whether the Plaintiff Invented the Subject Invention as An Employee’s Invention**

##### **1) Relevant Legal Principles**

Article 2( i ) of the Patent Act provides that the term “invention” means the highly advanced creation of a technical idea utilizing the laws of nature. Further, a “person who makes an invention” stipulated by Article 33(1) of the Patent Act refers to a person who conducts this inventing act. Thus, the following would be insufficient to become an inventor (including a joint inventor): providing only the fundamental problem and idea for an invention; carrying out a general management job for researchers, organizing the data, and conducting experiments under the instructions of a researcher; or supporting or delegating the completion of an invention by providing funds, facilities, etc. Rather, it is required to substantially contribute to the creation of a technical idea as follows: to newly present, add, or supplement a definite idea to solve a technical problem of an invention; to embody a new idea through experimentation, etc.; or to be able to invent by providing definite means and methods or definite advice and instructions for the purpose and effect of an invention (Supreme Court Decision 2011Da67705, 67712, dated December 27, 2012).

## 2) Discussion

a) As examined above, the plaintiff participated in the development of the Engine A2 at Issue from the beginning, and thereafter, an application for the Subject Invention was filed with the plaintiff as a joint venture, based on the proposal for the invention that the plaintiff submitted to the defendant. In light of the statements in the plaintiff's exhibit 12 and the defendant's exhibit 1, it is acknowledged that the description of the invention and drawings included in the proposal for the invention that the plaintiff submitted to the defendant before filing an application for the Subject Invention are substantially identical to the specification of the Subject Invention.

b) However, in light of the facts and circumstances stated below, it seems that the plaintiff tested while developing the engine

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A2 at Issue so that DPF worked under optimized conditions in a regeneration logic of the engine A2 and participated in the “calibration” to find definite values through tests but prepared and submitted to the defendant a proposal for an invention as if he/she had invented logic, etc., applied to the engine A2 once the development of the engine A2 has been completed. We do not trust the statements of the plaintiff’s exhibit 8, which contradicts what is stated above. Hence, it may not be deemed, only with the established facts above, that the plaintiff substantially contributed to the creation of the Subject Invention as an employee’s invention. Also, there is no other evidence to acknowledge that the plaintiff arrived at the Subject Invention by substantially contributing to the creation of the Subject Invention in relation to the business of the defendant.

(1) In the complaint and briefs (the old elucidation application, dated May 23, 2019, etc.), the plaintiff argued the following: “the employee’s invention at issue invented a ‘controller control logic’ which could effectively tune an operation temperature of DPF”; and “the plaintiff completed the employee’s invention at issue by adding a new technical idea (an idea D) that, where a remaining soot mass becomes equal to or less than a certain amount, the DPF regeneration will end.” Accordingly, if it is presumed that the disclosure of “exceed” in Claims 1 and 5 of the Subject Invention is a mistake in writing “less than,” a technical idea of the Subject Invention is identical to the technology applied to DPF of the Engine A2 at Issue completed before filing the application of the Subject Invention. Also, “DELPHI DIESEL SYSTEMS FRANCE SAS” (hereinafter, “DELPHI”), which had manufactured the engine management system (EMS) of the defendant’s engine J, made the EMS of the engine A2<sup>2)</sup> by modifying the EMS of the engine J. The logic of the engine A2 was completed,

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2) Various controls related to an automobile engine are managed by EMS, which also manages the execution and conversion of a DPF regeneration mode, i.e., DPF regeneration control.

as the defendant sent, on October 21, 2008, to DELPHI a function request to implement, even in EMS of the engine A2, the idea B embodied in the development of the EMS of engine R. Also, the plaintiff was not involved in the preparation and completion of the DPF regeneration logic in not only the engine A2 but also the engine J and R (Defendant's Exhibits 5 and 39).

(2) The plaintiff also asserts that the plaintiff first found a problem with the idea C in which the DPF regeneration is exited, if a certain amount of time elapses after an engine enters an idle state; and a key technical idea of the Subject Invention is to terminate the DPF regeneration only with the idea D by removing the problem and inventing an organic combination of ideas A, B, and D (The plaintiff's demand and application for modification of grounds for demand dated April 21, 2020, briefs dated May 27, 2021, July 23, 2021, September 14, 2021, etc.)

According to the statements in the plaintiff's exhibits 7, 12, 13, and 16, the following facts are acknowledged: on March 22, 2013, after the development of the Engine A2 at Issue, the plaintiff shared with the persons in charge in the defendant through e-mails the fact that the Engine A2 at Issue should, unlike the R engine, have DPF regeneration conditions to continue to maintain DPF regeneration when entering an idle state, such as waiting for a signal after entering DPF regeneration; the specification of the Subject Invention that the plaintiff argues to be the employee's invention discloses in the description of the invention ([0010] to [0013]) problems of the idea C, such as the problem of exiting DPF regeneration after a vehicle enters an idle state and a predetermined time elapses and a solution therefore; and "B Tucson 2.0 Diesel" and "KIA Sportage 2.0 Diesel" mounted with the defendant's engine R, developed and produced in large volume before the Engine A2 at Issue exceeded the allowable exhaust gas standard of the Ministry of Environment and the defendant recalled them due to a defect in DPF in those vehicles.

However, the following facts are not disputed by the parties or

## PATENT COURT DECISIONS

acknowledged by the statements in the defendant's exhibits 1, 2, 25, and 26. In light of these facts and circumstances, it is difficult to acknowledge that the plaintiff substantially contributed to the creation of the Subject Invention by combining ideas A, B, and D by removing the idea C in the DPF regeneration.

i) The claims of the Subject Invention are composed of the combination of the ideas A, B, and D defined above (A+B+D). However, the claims and the detailed description of the invention state no means, composition, method, etc., as to the following: how the idea C was not operated in the DPF regeneration process, unlike the existing technologies; or how to prevent the "exit" of DPF regeneration from occurring under other conditions before the idea D "ends" DPF regeneration. Further, we have already examined the following facts: the logic of the Subject Invention above is identical to what is applied to the DPF regeneration logic of the engine A2; and the plaintiff has never engaged in the preparation of the DPF regeneration logic of the engine A2.

ii) On the other hand, ideas A, B, C, C', and D were not only prior arts shared in the defendant company or the industry concerned in relation to the DPF regeneration before the completion of the Subject Invention but also the defendant has perceived the necessity of controlling an oxygen concentration depending on a soot mass under conditions vulnerable to DPF regeneration, such as idle state, etc., since November 2007. The Passenger Diesel Engine Test Team began reviewing the same. Also, the defendant had already mass-produced (as of September 2008) engines J by applying the DPF regeneration method of ideas A+B+D deducting the idea C before the plaintiff submitted the proposal for invention as to the Subject Invention (May 13, 2014). That is, there was no idea C from the beginning in the EMS as well as in the engine J and the engine A2 delivered from DELPHI. Also, the EMS of engine A2 has never been modified for the purpose of regeneration, ending, and exit of DPF.

iii) Also, the United States Patent and Trademark Office

rejected the defendant's patent application that explicitly modified "exceed" in Claims 1 and 5 of the Subject Invention to "less than." It was rejected on the ground that the same technology was already disclosed in US2011/0107741 published on May 12, 2011, which was prior to the filing date of the application.

iv) On the other hand, as examined above, even under the defect correction plan (Defendant's Exhibit 23) prepared by the defendant after the recall of vehicles with the engine R, it is difficult to acknowledge that the defect was caused by the application of the idea C to DPF regeneration. Also, ideas A, C, and D were adopted in the engine A2 that corresponds to EURO 6. Further, there is no data to acknowledge that the EURO 6 engine A2 had a problem as argued by the plaintiff.

(3) Also, the plaintiff argued the following: even an initial model of the engine A2 that the plaintiff received from the defendant for DPF-related operations has the DPF regeneration logic (the idea C') designed to exit from the DPF regeneration like the engine J, where a temperature at a front end of the DPF is less than a certain temperature (400°C) for a certain amount of time (60 seconds); the plaintiff kept the temperature at a front end of the DPF from reaching the conditions stated above through the calibration; and thus, the plaintiff kept the idea C' from being operated in the Subject Invention (Briefs, etc., dated September 03, 2020, September 23, 2020, October 27, 2020, June 22, 2021, August 11, 2021, August 20, 2021, August 22, 2021).

However, the specification of the Subject Invention in which the plaintiff argues to be the employee's invention discloses no special means, composition, method, etc., as to how to keep the idea C' from being operated in the DPF regeneration process. Moreover, on October 24, 2011, after the Engine A2 at Issue was mass-produced, the plaintiff submitted to the defendant a report titled "Report on Completion of Development of A2-2.5L E5 TQ WGT MT CD DPF" in relation to the Engine A2 at Issue (Plaintiff's Exhibit 35,

## PATENT COURT DECISIONS

Defendant's Exhibit 41). This report only contained the fact that in addition to the results of experimentation on the DPF regeneration logic and optimal calibration values therefrom, the DPF regeneration logic operated stably without overheating, even in cases where the DPF regeneration was exited after a certain amount of time had elapsed in an idle state, which the plaintiff argued to remove. However, this report does not state to the effect that the plaintiff newly developed the "removal" of the idea C or C'.

Meanwhile, in light of the statements and images in the plaintiff's exhibit 47 and the defendant's exhibit 13, and testimony of the witness G, the following facts are acknowledged: the proposal for an invention submitted by the plaintiff contains the "strategy for maintenance of exhaust gas temperature (560°C DLTKD) when stopped during regeneration (idle state)" (page 9 and 10 of Defendant Exhibit 13); and the plaintiff performed the calibration so that the Engine A2 at Issue, to which the subject employee's invention applies, would keep the idea C' from being operated in a general environment, that is, a temperature at the front end of the DPF would be maintained at 400°C or over when entering an idle state. However, it cannot be said that the above strategy stated in the proposal for invention submitted by the plaintiff is to remove the idea C'. Also, it may not be deemed that the plaintiff completed the Subject Invention as the employee's invention only with the facts stated above as long as the specification of the Subject Invention has no technical means shown above as the plaintiff contends.

(4) As examined above, the defendant paid the plaintiff KRW 18,750 and KRW 37,500 on May 23, 2014, and October 24, 2014, respectively. However, it is difficult to deem that it is presumed that the plaintiff substantially contributed to the creation of the Subject Invention, considering the following facts or circumstances acknowledged by the disclosures and images in the plaintiff's exhibits 10, 20, and 41: A person in charge of intellectual property of the defendant understood the core of the proposal for an invention submitted by the

plaintiff as “to maintain DPF regeneration until a soot mass in the DPF becomes equal to or less than 2% in a condition where an oxygen concentration is maintained to be equal to or less than 8% at the front end of the DPF when being stopped.” Accordingly, it is difficult to deem that, as argued by the plaintiff, with the payment of compensation, the defendant acknowledged the plaintiff's contribution to an invention that removed the idea C or C' idea from the DPF regeneration method in an idle state. The plaintiff submitted, around May 13, 2014, about 3 years after the Engine A2 at Issue, to which the Subject Invention applies, began to be produced in large volume in June 2011, to the defendant the proposal for an invention containing the Subject Invention through the intellectual property application system of the defendant company. Further, the defendant has encouraged its employees to prepare and submit patent applications by assigning and comparing department allocations since 2009.

### 3) Summary of Discussion

Accordingly, it may not be said that the plaintiff substantially contributed to the creation of technical ideas in the Subject Invention. Hence, it may not be deemed that the plaintiff completed the Subject Invention as an employee's Invention.

### **B. Sub-conclusion**

In this respect, the plaintiff's argument that the defendant is liable for the compensation for an employee's invention on the premise that the plaintiff completed the Subject Invention as the employee's invention is without merit.

#### 4. Conclusion

Accordingly, the Claim at Issue of the plaintiff is without merit, and thus, shall be dismissed without further examination. The portion of the lower court's decision, which is inconsistent with the above analysis and thus erroneous, where the defendant lost shall be revoked. The plaintiff's claim corresponding to the revocation shall be dismissed. The plaintiff's appeal is without merit and thus shall be dismissed. It is so decided as ordered.

Presiding Judge	Sangwoo KIM
Judge	Hyejin LEE
Judge	Young Gi KIM

[Appendix]

## Main Content and Drawings of the Subject Invention

### ① Field of the Invention

[0001] The present invention relates to a method and a system of maintaining diesel particulate filter (DPF) regeneration for improving durability of a DPF, and more particularly, a method and a system of maintaining DPF regeneration for improving durability of a DPF by maintaining the DPF regeneration until a soot mass in the DPF is equal to or less than a set target reference value even when a vehicle enters an idle state while the vehicle is driven.

### ② Background Art and Problem to Be Solved

[0006] Meanwhile, when the vehicle enters an idle state while the diesel particulate filter regenerates the particulate materials depending on the post-injection control, oxygen concentration is increased and a flux of exhaust gas is reduced to cause abnormal DPF regeneration. In this case, when the diesel particulate filter exceeds an endurance limit temperature and a limit temperature gradient of a filter, melting, cracks, and the like occur in the diesel particulate filter, such that the diesel particulate filter may be damaged.

[0009] FIG. 1 is a graph illustrating an operation temperature of the filter and a gradient temperature of the filter when the vehicle enters the idle state during the DPF regeneration process. As illustrated in FIG. 1, the DPF regeneration process is made while the engine is driven at approximately 2,000 rpm and the oxygen concentration of a front end of the DPF is controlled to be 15% or less in section "A" in which a general driving state is represented and the vehicle is driven at approximately 700 to 800 rpm and the oxygen concentration of the front end of the DPF is controlled to be 8% or less when the vehicle enters the so-called idle state during drop to idle (section "B") and then the oxygen concentration of the front end of the DPF is not controlled in a section "C".

## PATENT COURT DECISIONS

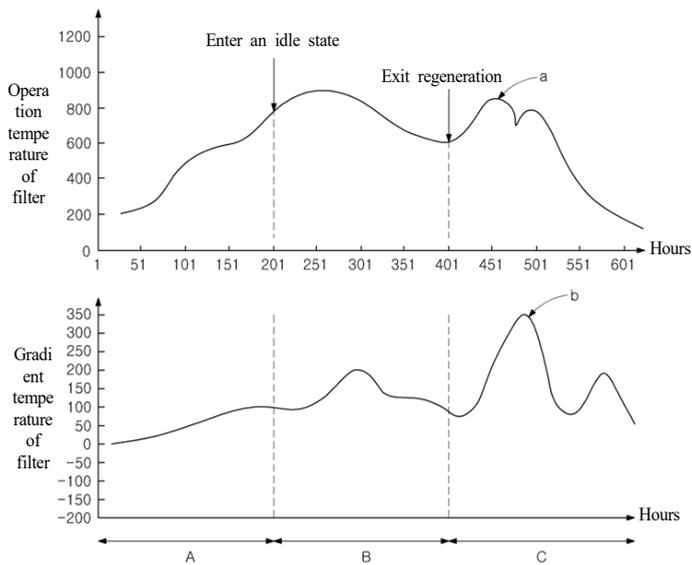


FIG. 1

[0010] In this case, when the vehicle enters the idle state and the DPF regeneration process exits after a predetermined time lapses, as illustrated, the operation temperature of the filter rises, and thus reaches point “a” which is a highest temperature and the gradient temperature of the filter also reaches point “b” which is a highest temperature.

[0011] That is, when the generation process exits in the state in which a large amount of soot is still present in the DPF, the oxygen concentration is increased and when an excessive amount of oxygen is supplied to an ignited filter, the temperature in the filter suddenly rises and thus the gradient temperature of the filter also suddenly rises.

[0013] The related art for solving the existing problems as described above is disclosed. In connection with the related art, a related art titled “Apparatus And Method for Protecting Diesel Particulate Filter” (KR 10-2011-0035691) is implemented by determining whether abnormal DPF regeneration occurs when a vehicle enters an idle state during the generation of the diesel particulate filter to prevent the diesel particulate filter from rising to a limit temperature or more but has a limitation that it does not disclose the technical idea of the present invention which maintains the DPF regeneration for a predetermined time even when the vehicle enters the idle state until a soot mass in the DPF is a predetermined

reference value or less.

[0016] Various aspects of the present invention are directed to providing a method and a system of maintaining DPF regeneration for improving durability of a DPF capable of preventing damage to the DPF by maintaining the DPF regeneration process until a soot mass in the DPF is equal to or less than a set target reference value even when a vehicle enters an idle state during the DPF regeneration process so as to prevent damage to the DPF which occurs when the vehicle enters the idle state during the DPF regeneration process.

**[3] Detailed description**

[0032] FIG. 2 is an overall flow chart of a method of maintaining DPF regeneration for improving durability of a DPF. As illustrated, the present invention largely includes determining whether a vehicle enters an idle state (S100), controlling a concentration of oxygen introduced into the DPF to be equal to or less than a set first reference value (S200), and performing a DPF regeneration process until a soot mass in the DPF is equal to or less than a set target reference value (S300).

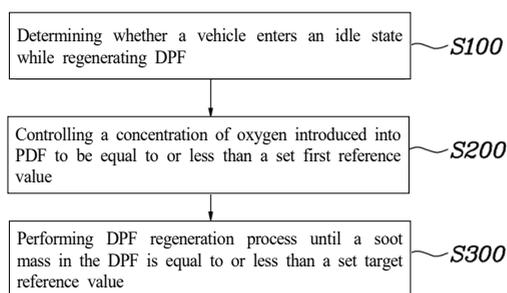


FIG. 2

introduced into the DPF to be equal to or less than a set first reference value (S200), and performing a DPF regeneration process until a soot mass in the DPF is equal to or less than a set target reference value (S300).

[0033] First, the determining whether the vehicle enters the idle state during the regeneration process of the DPF is performed (S100) and it may be detected whether the vehicle enters the idle state based on various information such as acceleration pedal signal, gear ratio, etc.

[0034] Meanwhile, if it is confirmed that the vehicle enters the idle state during the DPF regeneration process by using several signal of the vehicle as described above, the controlling of the concentration of oxygen introduced into the DPF to be equal to or less than the set first reference value is performed. (S200)

[0035] That is, the oxygen concentration is controlled to be equal to or less than the set first reference value to prevent the DPF from being exposed to a high temperature for improving the durability of the DPF, in which the oxygen concentration which is the first reference value may be controlled to 8% or so.

[0036] Meanwhile, the regeneration process is performed until an amount of soot in the DPF is equal to or less than the set target reference value while the concentration of oxygen introduced into the DPF is controlled to be equal to or less than the first reference value as described above.

[0037] That is, according to the related art, the DPF regeneration process exits after the predetermined time lapses when the vehicle enters the idle state during the DPF regeneration process. In this case, the regeneration process is suspended while a large amount of soot still remains in the DPF, and then, the oxygen concentration is increased, such that the temperature of the DPF may rise while the soot burning in the DPF is excessively burned due to the excessively supplied oxygen. To prevent the above problem, various embodiments of the present invention have a characteristic in that the DPF regeneration process is maintained until the soot mass in the DPF falls to the set target reference value or less even though the vehicle enters the idle state during the DPF regeneration process.

[0040] By the foregoing process, while the concentration of oxygen introduced into the DPF is controlled even though the vehicle enters the idle state during the regeneration process, the regeneration process is performed until the soot mass in the DPF is equal to or less than the set target reference value to prevent the DPF from arriving at a maximum limit temperature and a limit temperature gradient of the DPF, such that it is possible to previously prevent the DPF from being damaged.

[0041] Meanwhile, as illustrated in FIG. 3, the method of maintaining DPF regeneration for improving durability of a DPF according to various embodiments of the present invention further includes comparing the soot mass in the DPF with a preset soot reference value when the vehicle enters the idle state (S110) after determining whether the vehicle enters the idle state during the regeneration of the DPF (S100).

[0042] That is, when the

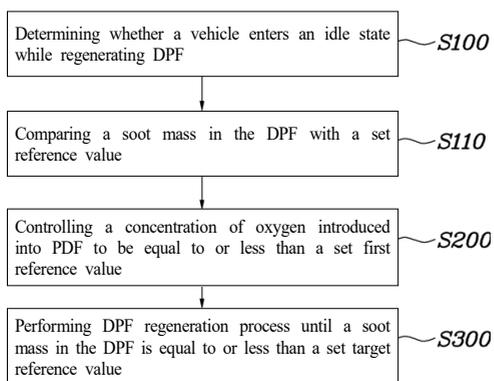


FIG. 3

soot mass in the DPF is equal to or more than 30% which is the soot reference value, the soot mass in the DPF is much and thus a lot of the soot are excessively burned to excessively rise the temperature of the DPF when the concentration of oxygen introduced into the DPF is excessively higher and thus the concentration of oxygen introduced into the DPF is controlled to be equal to or less than the set first reference value.

[0043] In this case, in the comparing of the soot mass in the DPF with the preset soot reference value when the vehicle enters the idle state (S110), when the soot mass in the DPF is more than the preset soot reference value, the method of maintaining DPF regeneration for improving durability of a DPF further includes controlling of the concentration of the oxygen introduced into the DPF to be equal to or less than a second reference value. The second reference value (S210, refer to FIG 4) may be set to be 15%.

[0044] That is, in case which the soot mass in the DPF is less than 30%, the soot mass in the DPF to be burned oxygen introduced into the DPF is relatively smaller, even when the concentration of oxygen introduced into the DPF is controlled to be 15%, not to be 8%. And, the regeneration of the DPF is performed until the soot mass in the DPF becomes equal to or less than 2%.

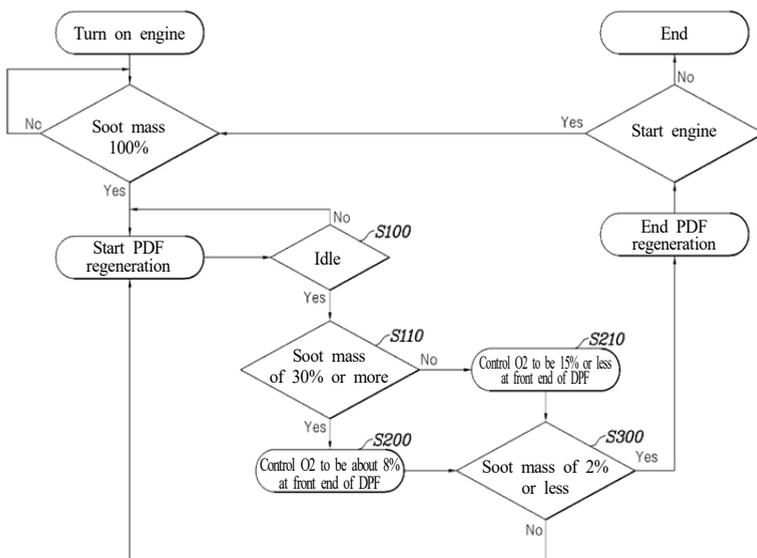


FIG. 4

[0045] Meanwhile, FIG. 4 is a flow chart illustrating a detailed control for each process of the method of maintaining DPF regeneration for improving durability of a DPF according to various embodiments of the present invention.

[0047] FIG. 5 is a graph illustrating an experiment result that the durability of the DPF is improved by maintaining the regeneration process by the foregoing control process until the soot mass in the DPF is equal to or less than the target reference value even when the vehicle enters the idle state during the regeneration process.

[0048] As illustrated, the regeneration process is performed until the soot mass in the DPF is equal to or less than the target reference value when the vehicle enters the idle state during the regeneration process and thus an operation temperature X of the DPF and a gradient temperature Y in the filter are formed to be smaller than a limit value as compared with the related art, thereby confirming that the durability of the DPF is improved.

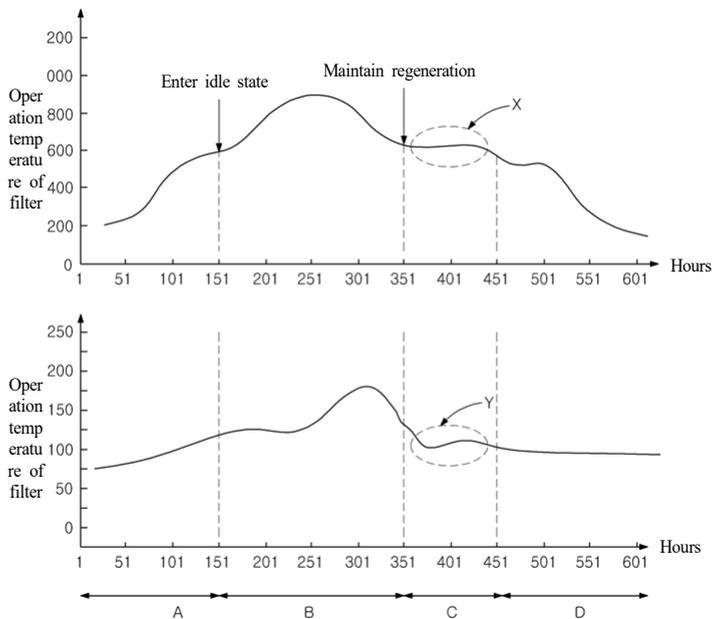


FIG. 5

[0049] For reference, region “A” is a region in which the concentration of oxygen introduced into the DPF is controlled to be equal to or less

than 15%, region "B" is a region in which the concentration of oxygen intruded into the DPF is controlled to be equal to or less than 8%, region "C" is a region in which the concentration of oxygen again introduced into the DPF is controlled to be equal to or less than 15%, and region "D" is a region in which the concentration of oxygen introduced into the DPF is no more controlled.

[0050] Further, FIG. 6 is a graph illustrating a change in a variation of the soot mass in the DPF by controlling an engine speed and the concentration of oxygen introduced into the DPF according to various embodiments of the present invention.

[0051] As illustrated, the concentration of oxygen introduced into the DPF according to various embodiments of the present invention is controlled when the vehicle enters the idle state while the regeneration process is performed while the vehicle is driven and the regeneration process is performed until the soot mass in the DPF is equal to or less than the set target reference value, thereby improving the durability of the DPF.

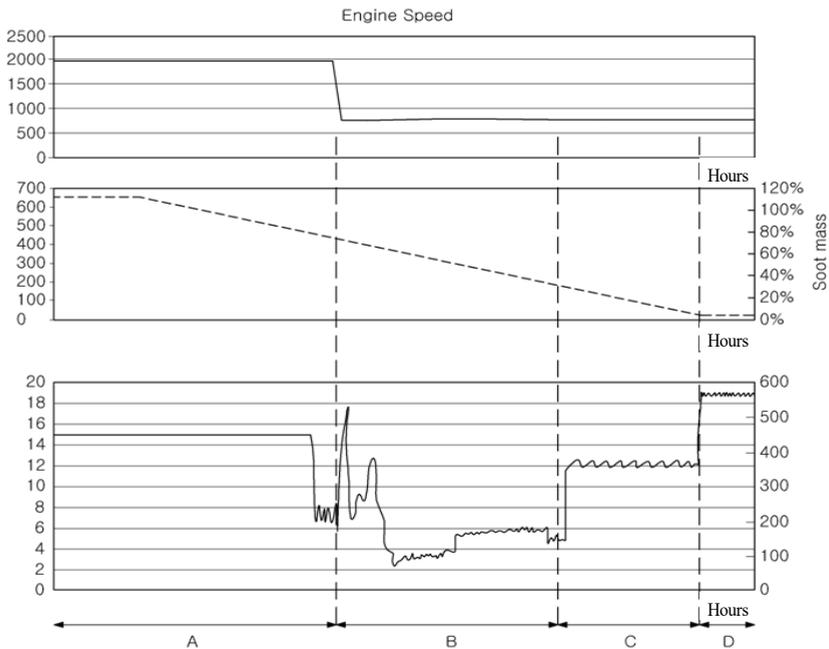


FIG. 6

[0052] Meanwhile, the concentration of oxygen introduced into the DPF is controlled by using a shutoff valve installed in front of the engine.

[0054] The controller (100) receives the signal about whether the vehicle is currently in the idle state and controls the concentration of oxygen introduced into the DPF to be equal to or less than the first reference value to maintain the regeneration until the soot mass in the DPF reaches the set target reference value.

[0055] Further, the controller (100) further includes receiving the signal about whether the vehicle is currently in the idle state and then controlling the concentration of the oxygen introduced into the DPF to be equal to or less than the first reference value when the soot mass in the DPF is equal to or more than the preset soot reference value, and when the soot mass in the DPF is less than the preset soot reference value, controlling, by the controller, the concentration of the oxygen introduced into the DPF to be equal to or less than a second reference value larger than the first reference value until the soot mass in the DPF reaches the set target reference value.

#### **④ Effect of the Invention**

[0029] Various aspects of the present invention are directed to providing a method and a system of maintaining DPF regeneration for improving durability of a DPF capable of preventing damage to the DPF by maintaining the DPF regeneration process until a soot mass in the DPF is equal to or less than a set target reference value even when a vehicle enters an idle state during the DPF regeneration process so as to prevent damage to the DPF which occurs when the vehicle enters the idle state during the DPF regeneration process.

[0057] According to the method and system of maintaining DPF regeneration for improving durability of a DPF according to various embodiments of the present invention configured as described above, it is possible to improve the durability of the DPF by controlling the amount of oxygen introduced into the DPF for the temperature of the DPF to be below the endurance limit temperature and the limit temperature gradient of the DPF and performing the DPF regeneration process until the soot mass in the DPF is equal to or less than the target reference value.

**Compensation for Employee's Invention Case**

**PATENT COURT OF KOREA  
SECOND DIVISION  
DECISION**

**Case No.** 2020Heo4464 Invalidation of  
Registration (Trademark)

**Plaintiff** A  
Representative Allen Lo  
Counsel for Plaintiff B  
Lawyers Jongseok Kim, Gyeongtae Gang  
Patent Attorney Mingyeong Ji

**Defendant** C  
Counsel for Defendant  
Patent Attorney Jeonghan Eom

**Date of Closing Argument** March 09, 2021

**Decision Date** April 09, 2021

**ORDER**

1. The IPTAB Decision 2019Dang893 dated April 14, 2020 shall be revoked.
2. The litigation cost arising from this litigation shall be borne by the defendant.

**PLAINTIFF'S DEMAND**

As ordered.

## OPINION

### 1. Basic Facts

#### A. Defendant's Registered Service Mark

1) Registration Number/ Filing Date of Application/ Date of Registration Decision/ Date of Registration: Service Mark Registration No. 400309/ February 24, 2016/ July 19, 2017/ July 25, 2017

2) Mark at Issue:   
INSTA MODEL

3) Designated Services of Use: Model recruitment agencies service, modeling agencies service, recruitment agencies service, personnel recruitment, employee leasing, employment service, providing employment information via a global computer network, headhunting, marketing, market research, and market analysis, providing business and marketing information, advertising and marketing consultancy services, advertising and marketing, advertising, marketing and publicity services, consultancy services relating to advertising, publicity and marketing, providing advice relating to marketing, development and implementation of marketing strategies for others, marketing strategy planning, and investigations of marketing strategy in Class 35 under the Category of Services

#### B. Plaintiff's Prior-filed Service Mark

1) Registration Number/ Filing Date of Application/ Registration Date: Service Mark Registration No. 354569/ August 24, 2015/ April 01, 2016

2) Mark at Issue: 

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3) Designated Services of Use: Marketing, advertising services, promotion services, dissemination of advertising for others via computer and communication networks, promoting the goods and services of others via computer and communication networks, marketing and advertising consultation service, market research services, provision of market research information, online advertisements, advertising, marketing and promoting the goods and services of others by means of providing photo and video equipment at special events in Class 35 under the Category of Services

### C. Plaintiff's Prior-used Service Marks

1) Mark at Issue:  (Prior-used Service Mark 1),

 (Prior-used Service Mark 2)

2) Services of Use: Computer software, access to the internet platform to exchange digital pictures, providing social networking services, advertising and marketing consultancy services, etc.

3) Period: Since October 06, 2010

### D. IPTAB Decision

1) The plaintiff filed an action against the defendant to invalidate the registration of the registered service mark at issue of the defendant (hereinafter, the "registered service mark at issue") with the Intellectual Property Trial and Appeal Board (hereinafter, the "IPTAB") on March 15, 2019, under Case No. 2019Dang893, asserting that "A. Defendant's Registered Service Mark" falls under Article 8(1) of the Old Trademark Act (before being wholly amended by Act No. 14033, February 29, 2016; hereinafter, the "Old Trademark Act") in relation to "B. Plaintiff's Prior-filed Service Mark"; "A.

Defendant's Registered Service Mark" falls under Articles 7(1)(x) to 7(1)(xii)<sup>1</sup> of the Old Trademark Act in relation to "C. Plaintiff's Prior-used Service Marks"; and thus the registration of the registered service mark at issue shall be invalidated.

2) The IPTAB made a decision to dismiss the above request for trial by the plaintiff on April 14, 2020, concluding that "the Prior-filed Service Mark and the prior-used service marks are viewed as *Instagram*," as a whole, and thus these marks are not similar to the registered service mark at issue when they are compared. Also, the prior-used service marks are not easily associated with the registered service mark at issue, or it would not be misconceived or confused as being closely related to the prior-used service marks. Therefore, the registered service mark at issue does not fall under Articles 8(1) and 7(1)(x) to 7(1)(xii) of the Old Trademark Act" (hereinafter, the "IPTAB decision").

**【Factual basis】** Undisputed facts, statements in plaintiff's exhibits 1, 2, and 4 (including Exhibits with branching numbers, if any; hereinafter, the same shall apply), the purport of the overall argument

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1) Article 4 of the Addenda to the Trademark Act wholly amended with Act No. 14033 on Feb. 29, 2016 provides, as the applicability to trademark of which registration cannot be obtained, that "the amended provisions of Article 34(1) (excluding the amended provisions of subparagraph 21 of the same paragraph) shall also apply where a decision to grant trademark registration for which an application was filed before this Act enters into force is made after this Act enters into force." As examined in 1.A shown above, an application for the registered service mark at issue was filed on Feb. 24, 2016 and its registration was decided on Jul. 19, 2017, which is after the amended Act entered into force. Thus, as to the provision as to a mark of which registration cannot be obtained, Article 34(1)11 to 13 of the existing Trademark Act shall be applied instead of Article 7(1)10 to 12 of the former Trademark Act. Hereinafter, the above provisions as to Article 7 of the former Trademark shall be stated with corresponding provisions as to Article 34 of the existing Trademark Act.

## 2. Arguments And Discussion

### A. Summary of Parties' Arguments

#### 1) The Plaintiff

a) Since the registered service mark at issue is similar to the Prior-filed Service Mark in terms of marks and designated goods, it falls under Article 8(1) of the Old Trademark Act.

b) The registered service mark at issue is likely to cause confusion with the plaintiff's goods or businesses, which are remarkably recognized among purchasers or damage their distinctiveness or reputation, and thus falls under Article 34(1)(xi) of the Trademark Act.

c) The registered service mark at issue is identical or similar to the prior-used service marks, which are perceived as indicating the plaintiff's services. Further, the designated services of the registered service mark at issue are also identical, similar, or closely related to the use services of the prior-used service marks. Thus, the registered service mark at issue falls under Article 34(1)(xii) of the Trademark Act.

d) The registered service mark at issue is similar to the prior-used service marks, which are recognized as indicating the source of goods of the plaintiff on the date when its registration decision was made and is to be used for undue profits by taking advantage of the reputation embodied in the prior-used service marks. Therefore, the registered service mark at issue also falls under Article 34(1)(xiii) of the Trademark Act.

#### 2) The Defendant

The registered service mark at issue does not fall under Article 8(1) of the Old Trademark Act or Articles 34(1)(xi) to 34(1)(xiii) of the

Trademark Act on the following grounds:

a) The Prior-filed Service Mark and the prior-used service marks are not abbreviated as the term “*Insta*.” When these marks are compared with the registered service mark at issue in its entirety, the two marks are not similar. Also, the Prior-filed Service Mark and the prior-used service marks are not associated with the registered service mark at issue, either.

b) Also, the defendant paid proper expenses to the plaintiff and made advertisements on the Facebook page provided by the plaintiff. Thus, an undue purpose is not acknowledged for the use of the registered service mark at issue by the defendant, either.

## **B. Whether Article 34(1)(x iii) of the Trademark Act May be Applied**

### 1) Relevant Laws

The purpose of Article 34(1)(x iii) is to prohibit the registration of a trademark by a third party who imitates a mark recognized as indicating the goods of a specific person (hereinafter “the subject mark for counterfeiting”) among purchasers within or outside of Korea, and which is not registered in the territory of Korea, being used for unjust purposes such as gaining undue profits by taking advantage of business reputation associated with “the subject mark for counterfeiting,” or harming the value of “the subject mark for counterfeiting,” or inflicting harm on the holder of “the subject mark for counterfeiting” by obstructing business within Korea from the use of the counterfeit mark. In summary, there are two premises for the registered trademark to meet this provision: one is that the subject mark for counterfeiting shall be recognized as a trademark of a specific person by consumers in Korea or overseas, and an applicant of the registered trademark shall use a mark identical or similar to the subject mark for counterfeiting with unjust purposes. Here, it shall be

## PATENT COURT DECISIONS

determined whether the “subject mark for counterfeiting” is recognized as a trademark of a specific person by consumers in Korea or overseas in light of the following: length, method, type, scope, etc. of use of the trademark; whether the trademark is known objectively substantially under the custom of trade or social norms, etc. Whether an applicant of the registered trademark has unjust purposes shall be determined as of the filing of an application for the registered trademark in light of the following: to what extent a trademark of a specific person is recognized and creative; to what extent the trademark of a specific person is identical or similar to the trademark of the applicant; whether the applicant negotiates with the specific person as to trademarks and the details thereof, if any; other relationships between the two parties; whether the applicant concretely prepared a business using the registered trademark; whether goods are identical, similar, or economically related; the course of trade, etc. (Supreme Court Decision 2017Hu752, dated August 14, 2019).

### 2) Whether the Prior-used Service Marks Are Recognized as A Service Mark of A Specific Person by Consumers

a) In light of statements and images in the plaintiff’s exhibits 3, 7 to 10, and 17 and the purport of the overall argument, the following facts may be acknowledged:

(1) Since October 06, 2010, the plaintiff has provided the social media services titled “INSTAGRAM,” using the prior-used service marks, with which users can share pictures and images and check the news with one another. Also, since December 2012, the plaintiff has provided the Service above even in the Korean language.

(2) In INSTAGRAM service that the plaintiff provided, the number of user accounts was about 400 million, and about 80 million pictures were uploaded every day in September 2015 when 5 years had passed since its establishment. In early 2015, the number of monthly unique visitors in Korea was about 4.28 million.

(3) When “인스타그램” was searched in D, an Internet portal site, from October 06, 2010 to February 24, 2016, which is the filing date of the application for the registered trademark at issue, a total of 459,624 news articles were found in relation to the plaintiff.

b) It seems that the prior-used service marks of the plaintiff were recognized as a service mark of a specific person at least in relation to providing of social networking services by consumers in Korea or overseas as of February 24, 2016, when an application for the registered service mark at issue was filed, in light of the following: the facts established above; a period of use of the prior-used service marks; news reports on the prior-used service marks by news media; popularity through the internet during the entire period of use, etc.

### 3) Whether the Registered Service Mark at Issue Is Similar to The Prior-used Service Marks

a) It would be reasonable to deem that the prior-used service marks are abbreviated only as “Insta” and “INSTA”, in light of statements in the plaintiff’s exhibits 16, 17, and 23 and the purport of the overall arguments.

(1) If the prior-used service marks are referred to by their full names, ordinary consumers would feel uncomfortable as “인스타그램” is composed of 5 syllables. Thus, it might be abbreviated only as “인스탁,” and ordinary consumers tend to remember trademarks with brief designation or conception.

(2) When “인스탁” or “INSTA” was typed in D, an Internet portal site, for the period from October 06, 2010 to February 24, 2016, about 132 blog posts and about 124 news articles were found in relation to “인스타그램” provided by the plaintiff. The blog posts and news articles abbreviated the “인스타그램” service provided by the plaintiff only as “인스탁.”

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(3) D blog, media articles, etc., used various words newly coined by adding other words to “인스타” as follows: “인스타 하플” (Plaintiff’s Exhibit 16-66); “인스타 스타” (Plaintiff’s Exhibit 16-75, 16-128, 17-17); “인스타 마켓” (Plaintiff’s Exhibit 16-97); “인스타 감성” (Plaintiff’s Exhibit 17-64); “인스타 여신” (Plaintiff’s Exhibit 17-115).

(4) The plaintiff filed applications for marks and obtained the registration thereof as follows: ① on March 21, 2014 (Date of claimed priority: September 25, 2013), an application was filed for “INSTASTOP” with designated goods of advertising, marketing services, etc., and, on May 07, 2015, it was registered under No. 56320; ② an application was filed for “INSTAMEET” with the date of claimed priority as December 18, 2013, and designated goods of “online social networking services,” etc., in Class 45, and, on October 05, 2015, it was registered under No. 1216981; ③ on November 19, 2015, an application was filed for “INSTA” with designated goods of computer software, etc., which could edit pictures and transmit and download the same in Class 09, and, on October 21, 2016, it was registered under No. 1210713; ④ on September 05, 2018, an application was filed for “인스타” with designated goods of “electronic transmission data/ message/ graphic/ picture/ image/ audio/ video/ audio-video contents/ information as telecommunication services” in Class 38, and, on November 21, 2019, it was registered under No. 1546187 (Plaintiff’s Exhibit 23).

b) As examined above, the prior-used service marks are briefly abbreviated only as “Insta” and “INSTA,” and the

“MODEL” in the registered service mark at issue  is not distinctive in relation to the designated services. Therefore, if

“*Insta*” and “INSTA” of the registered service mark at issue are compared with “*Insta*” and “**INSTA**” of the prior-used service marks, it would be reasonable to deem that the registered service mark at issue is similar to the prior-used service marks in that both marks are referred to as “인스타,” making them identical in terms of phonetic similarity and the meaning.

c) In response, the defendant asserts that since there are many registered marks including “INSTA” in many countries, such as the U.S., the registered service mark at issue is not a mark whose application was filed as counterfeiting the prior-used service marks, and thus the two marks are not similar.

However, KIPO determines whether to register a mark by examining each application separately if it meets the requirements stipulated by the Trademark Act. The registration of a filed mark shall be determined independently in relation to its designated goods under the Trademark Act of Korea and shall not be limited by registration examples in foreign countries with different legal systems (Supreme Court Decision 2002Hu1768, dated May 16, 2003). As examined above, the prior-used service marks were abbreviated only as “*Insta*” and “**INSTA**” in relation to their use services by ordinary consumers and traders in Korea as of the filing date of the application for the registered service mark at issue. Thus, it would be reasonable to deem that the registered service mark at issue is similar to the prior-used service marks.

#### 4) Whether the Defendant Had Unjust Purposes

a) In light of statements in the plaintiff’s exhibits 3, 6, 10, 11, 16, 17, 31, and 33 and the purport of the overall arguments, the following facts may be acknowledged:

**PATENT COURT DECISIONS**

(1) The plaintiff launched advertising service in November 2013 and September 2015 overseas and in Korea, respectively, starting to provide means with which the plaintiff could promote its own goods and services with its business profile (Plaintiff’s Exhibit 3). In November 2015, the plaintiff introduced the “INSTAGRAM Partner Program” to effectively select a developing company that could contribute to improving its platform marketing value as well as a good partner company to work with (Plaintiff’s Exhibit 10-8 and 11).

(2) The INSTAGRAM advertising and marketing services that the plaintiff provided were introduced in articles in various news media as shown below. Many businesses advertised their own goods and services with INSTAGRAM business accounts, INSTAGRAM promotion events, etc. Such promotional activities and marketing cases were introduced in D blog, various articles in media, etc. (Plaintiff’s Exhibit 16-27, 38, 42, 51, 73, 82, 83, 84, 97, 98, 103, 105, 110, and 113 and Plaintiff’s Exhibit 17-3, 6, 11, 13, 14, 16, 20, 23, 38, 41, 42, 50, 59, 63, 74, 80, and 93).

Articles (Evidences)	Details
E Sep. 9, 2015 (Plaintiff’s Exhibit 10-8, 17-41)	INSTAGRAM introduced advertising in the U.S. in November 2013 and in 8 countries, such as Germany, the U.K., France, Australia, Japan, etc. INSTAGRAM will begin advertising in about 30 countries including Korea from September 9. Four initial partners, such as F, G, H, etc., will participate. Jo, a regional director, stressed that “users across the world use INSTAGRAM for 21 minutes or more on a daily basis” and that “in particular, Korea is a key market as mobile communities are fully developed.”

Articles (Evidences)	Details
E Nov. 11, 2015 (Plaintiff's Exhibit 31-3)	INSTAGRAM, which is a picture-and image-based social media, launched, on November 11, the "INSTAGRAM Partner Program" together with 40 global partners. This program is to help advertisers choose partners and select developers for marketing with INSTAGRAM. Advertisers can market their goods and services by selecting a business fit for their purposes from 40 partners. Also, this program introduces how to improve recognition and produce customized advertising campaigns and provides benefits to allow the use of advertising tools and technologies on INSTAGRAM and Facebook.
I, J Nov. 5, 2015 (Plaintiff's Exhibit 17-63, 31-2)	INSTAGRAM, which is a picture-and image-based global SNS, held, on November 5, INSTAGRAM in Korea, a marketer event to introduce its advertising services, in K Dongdaemun Square Seoul. INSTAGRAM recently introduced various advertising services, such as picture-and image-based, slide-based, behavior-induced, etc., for the first time in Korea. In INSTAGRAM in Korea, INSTAGRAM shared with marketers how to market and advertise using INSTAGRAM based on the understanding of trends of users in Korea, etc.
J Dec. 12, 2015 (Plaintiff's Exhibit 17-80)	INSTAGRAM is improving its own business capabilities. INSTAGRAM launched picture-, image-, and slide-based advertising with various sizes and behavior-induced advertising. INSTAGRAM is increasing the number of advertisers with its user targeting capability, which is the greatest strength of Facebook's advertising. The fact that INSTAGRAM is increasing the number of advertisers is inspiring considering that 90% or more of the Facebook sales are generated from advertising.

(3) On February 25, 2016, L Co., Ltd. held a marketing seminar for targeting advertisement on Facebook and INSTAGRAM (Plaintiff's Exhibit 31-7).

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(4) On August 16, 2017, the defendant posted a message on its own Facebook page that “인스타그램 모델” launches a project, looking for INSTAGRAM influencers and INSTA models. Please let us know your name and INSTAGRAM ID with Join at the top right. Please join the project before the service opens in 2018. Try right now! You can be an INSTA model” (Plaintiff’s Exhibit 6). Even on a model recruitment page, the phrase “Try it! You can be an INSTA model” was stated (Plaintiff’s Exhibit No. 33).

b) It is determined that the registered service mark at issue is a mark that is used for unjust purposes to obtain undue profits by taking advantage of the business reputation, etc., of the prior-used service marks, based on the following facts: to what extent the prior-used service marks were known to consumers in Korea and overseas and were identical or similar with the registered service mark at issue when an application for the registered service mark at issue was filed; and the facts established above, such as ① of the designated services of the registered service mark at issue, the “marketing, market research, and market analysis, providing business and marketing information, advertising and marketing consultancy services, advertising and marketing, advertising, marketing and publicity services, consultancy services relating to advertising, publicity and marketing, providing advice relating to marketing, development and implementation of marketing strategies for others, marketing strategy planning, and investigations of marketing strategy” are similar or have economic ties in providing social network services, which is use service of the prior-used service marks, and ② the defendant would have been able to know of the existence of the prior-used service marks when an application for the registered service mark at issue was filed. Thereafter, the defendant tried to utilize the business reputation, etc., embodied in the prior-used service marks by using the registered service mark at issue presenting a “model who works on INSTAGRAM,” etc.

c) In this respect, the defendant contends that it did not have unjust purposes in filing an application for the registered service mark at issue and using the same because many trademarks including “INSTA” are registered in various countries, such as the U.S., etc., and the defendant posted the advertisement shown above (Plaintiff’s Exhibit 6) after paying a proper price to the plaintiff and obtained the plaintiff’s permission.

Even if, as the defendant argues, many trademarks including “INSTA” are registered in various countries, such as the U.S., etc., and the defendant posted the advertisement shown above after filing an application for the registered service mark at issue and paid properly to the plaintiff, the mere facts listed here does not guarantee that it is lawful under the Trademark Act in Korea that the defendant’s filing of an application and usage of the registered service mark at issue. Also, it is difficult to view that the defendant filed an application and used the registered service mark at issue with the plaintiff’s permission. It is insufficient to refute the defendant’s unjust purposes as acknowledged above. Thus, the defendant’s arguments above cannot be accepted.

#### 5) Summary of Discussion

Ultimately, the registered service mark at issue was similar to the prior-used service marks that were recognized as indicating the services of a particular person by consumers in Korea or overseas when its application was filed. Also, the defendant used the registered service mark at issue for unjust purposes. Therefore, the registered service mark at issue shall be invalidated as falling under Article 34(1)(xiii) of the Trademark Act. Therefore, the registered service mark at issue shall be invalidated without further examining the parties’ remaining arguments.

### 3. Conclusion

The IPTAB decision is inconsistent with the above analysis and shall not be upheld. The plaintiff's claim to revoke the IPTAB decision is therefore well grounded and shall be granted. It is so decided as ordered.

Presiding Judge	Sangwoo KIM
Judge	Hyejin LEE
Judge	Young Gi Kim

**PATENT COURT OF KOREA**  
**FIFTH DIVISION**  
**DECISION**

**Case No.** 2020Heo5986 Cancellation of Registration  
(Trademark)

**Plaintiff** A  
Counsel for Plaintiff  
Lawyer Gyeongmi Park

**Defendant** B  
Japan  
CEO C  
Counsel for Defendant  
Patent Attorney Mijeong Lee  
Subcounsel for Defendant  
Patent Attorney Yoonjae Jo

**Date of Closing Argument** April 13, 2021

**Decision Date** May 11, 2021

**ORDER**

1. The plaintiff's claim is dismissed.
2. The litigation cost arising from this litigation shall be borne by the plaintiff.

## PLAINTIFF'S DEMAND

The IPTAB Decision 2019Dang1927, dated August 07, 2020, shall be revoked.

### OPINION

#### 1. Basic Facts

##### A. The Registered Trademark at Issue (Plaintiff's Exhibit 1)

1) Registration Number/ Filing Date of Application/ Date of Registration Decision/ Registration Date: Trademark Registration Number 1476730/ July 06, 2016/ May 01, 2019/ May 08, 2019

2) Mark at Issue: The logo for 'Air-fit' is displayed in a stylized, 3D-effect font. The letters are white with a brown outline and a slight shadow, giving it a raised appearance.

3) Designated Goods: Diaper liners, diaper bands, diaper belts, diaper paper liners, adult diapers, disposable adult liners, disposable cellulose diapers, diapers for incontinence, disposable liners for babies' diapers, swim diapers for babies, babies' diapers, babies' diaper-pants, disposable cellulose diaper for babies, disposable training pants for babies, disposable diapers for babies, disposable diaper pants for babies, paper diapers, textile diapers in Class 5 under the Category of Goods

##### B. Prior-registered Mark (Plaintiff's Exhibit 2)

1) Registration Number/ Filing Date of Application/ Date of Registration: Trademark Registration Number 1053442/ April 23, 2013/ August 13, 2014

2) Mark at Issue: 

3) Designated Goods: Menstruation bandages, diapers for incontinence, sanitary napkins, incontinence diapers, menstruation tampons, paper diapers for babies, pants/absorbent/for incontinence, breastfeeding pads, wet tissues impregnated with pharmaceutical lotions in Class 5 under the Category of Goods

4) Owner of Rights upon Registration: Defendant

### C. IPTAB Decision

1) On June 14, 2019, the defendant filed an appeal for invalidation of registration of the registered mark at issue against the plaintiff with the Intellectual Property Trial and Appeal Board (hereinafter “IPTAB”), arguing that “the registered mark at issue falls under Article 34(1)(vii) and 34(1)(xiii) of the Trademark Act in its relation with the prior-registered mark.”

2) The IPTAB reviewed the appeal under Case No. 2019Dang1927 and issued a decision to accept the defendant’s request for a trial on August 07, 2020, stating that “since the registered mark at issue is identical or similar to the prior-registered considering the mark and designated goods and thus falls under Article 34(1)(vii) of the Trademark Act, its registration shall be invalidated” (hereinafter, the “IPTAB decision”).

**【Factual basis】** Undisputed facts, Plaintiff’s Exhibits 1 through 3, the purport of the overall arguments

## 2. Whether the IPTAB Erred

### 1) Plaintiff's Arguments

a) Since consumers would not intuitively read the prior-registered mark, composed of Japanese characters (Katakana), as “airfit”, the prior-registered mark is not similar to the registered mark at issue in terms of appearance, sound, and meaning. Even if the registered mark at issue is similar to the prior-registered mark in terms of the sound, it would not be likely to cause misconception or confusion in light of a pattern under which both marks are used. Therefore, it would be possible to prevent confusion as to a source of goods with the registered mark at issue as the registered mark at issue does not fall under Article 34(1)(vii) of the Trademark Act.

b) The prior-registered mark was not recognized as a trademark indicating a source of goods of a specific person in Korea and overseas. Therefore, the registered mark at issue does not fall under Article 34(1)(xiii) of the Trademark Act.

### 2) Defendant's Arguments

a) The registered mark at issue is similar to the prior-registered mark in terms of marks, and its designated goods are identical or similar to those of the prior-registered mark. Thus, the registered mark at issue falls under Article 34(1)(vii) of the Trademark Act.

b) The plaintiff filed an application for the registered mark at issue with respect to goods identical or similar to diapers for babies, which are the main goods of the prior-registered mark, for unjust purposes to take advantage of the credit and reputation embodied in the prior-registered mark. In this regards, the registered mark at issue falls under Article 34(1)(xiii) of the Trademark Act.

## B. Discussion

### 1) Relevant Laws

In determining whether marks are similar to each other, the pronunciation of a mark in foreign languages shall, in principle, be as pronounced naturally without difficulty by most traders or consumers in Korea. Where a concrete state of use is recognized, such as specific writing of a foreign mark in Korean by traders or consumers in Korea, etc., the pronunciation of such foreign mark shall be determined based on actual use practices (Supreme Court Decision 2004Hu2093, dated November 10, 2005).

### 2) Analysis

#### a) Whether Marks Are Similar

##### (1) Appearance

The registered mark at issue “” is a mark in which “Air” and “Fit” are connected with a dash (-) and located at the bottom. On the other hand, the prior-registered mark “” has Japanese “エアフィット” in red at the center and a red and blue wing including 9 stars. The two marks are different in terms of the words constituting them, and their appearances are not similar due to their differences in figures, fonts, etc. (there is no dispute over this matter between the parties).

##### (2) Sound and Meaning

(a) It seems that the registered mark at issue would be pronounced as “air fit” according to how English is pronounced naturally in Korea.

(b) It seems that the prior-registered mark would be pronounced and conceived as “air fit” with its letters (エアフィット) by consumers and traders in Korea, in light of the defendant’s exhibits 4 through 9, 31, 32, and 37 and the purport of the overall arguments.

## PATENT COURT DECISIONS

- ① The letters (エアフィット) of the prior-registered mark are composed of Japanese Katakana. In Japan, Katakana is used to mark foreign language, etc. In light of the development of information searching capability, the diffusion of Japanese in Korea, the fact that Katakana is used to mark foreign languages, etc., the fact that the prior-registered mark is transliterated as “air fit” even in the internet shopping malls<sup>1)</sup>, the English web-site of the defendant, etc., and the fact that, when consumers search “air fit diapers” on the internet shopping malls, goods bearing the prior-registered mark are found, it seems that consumers and traders in Korea would recognize the letters concerned as combining “エア (air, ea)”, which is the Japanese transliteration of the English word “Air”, with “フィット (fit, huito)”, which is the Japanese transliteration of the English word “fit”<sup>2)</sup>.
- ② Moreover, it seems that consumers of “diapers,” etc., which are designated goods of the prior-registered mark and the registered mark at issue, are highly cognitive to marks and product information, accustomed to online shopping, and relatively sensitive to quality and performance of goods concerned. Thus, it is determined that the consumers would experience less difficulty in perceiving the prior-registered mark as “air fit.”
- ③ The plaintiff argues that as long as the prior-registered mark is

combined with “” and used as “” consumers would observe the prior-registered mark as a whole and only perceive as “moonyman airfit,” and thus the two marks would not be likely to be misconceived or confused. However, it is difficult to deem, only with the evidence submitted by the

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1) “D”, “E”, “F”, “G”, “H”, etc.

2) In I Japanese dictionary, “エア” is pronounced as “air” and means “air“, and “フィット” is pronounced as “fit” and means “well-fitting (to a body)”, etc. (Defendant’s Exhibit No. 9).

plaintiff, that the prior-registered mark would be perceived only combined as “moonyman airfit” as a whole, in light of the following facts examined above: the prior-registered mark is perceived as “air fit” and traded as being transliterated as “air fit” even on the internet shopping malls and the defendant’s English web-site; and when consumers search “airfit diapers” on the internet shopping malls, products marked with the prior-registered mark are found.

(c) As examined above, “Air-fit” in the registered mark at issue and the prior-registered mark are both pronounced as “air fit.” Further, as the registered mark at issue or the prior-registered mark is composed of “Air-fit” or “Airfit,” which combines “air” and “fit,” it shall be deemed that their conception is identical or similar.

### (3) Results of comparison

The registered mark at issue is similar to the prior-registered mark in terms of sound and meaning but not appearance. Also, when taking the detailed course of trade for designated goods of both marks into account, the registered mark at issue is similar so that it is likely to cause misconception and confusion regarding the source of goods among consumers and traders, where the registered mark at issue is used together with the prior-registered mark onto the designated identical or similar.

b) Whether The Designated Goods Are Similar The designated goods of the registered mark at issue are “diapers,” “members for diapers,” etc. Also, the designated goods of the prior-used mark are “diapers for incontinence, paper diapers for babies, pants/absorbent/for incontinence, etc.” Therefore, they are identical or similar goods in terms of quality, use, production and sales, traders and consumers’ pools, etc. (the two parties do not argue in this respect).

### **C. Summary of Discussion**

As the registered mark at issue is similar to the prior-registered mark in terms of the mark and designated goods, the registered mark at issue falls under Article 34(1)(vii) of the Trademark Act. The IPTAB decision is consistent with the above analysis and shall be upheld without further examining the remaining arguments of the plaintiff.

### **3. Conclusion**

The plaintiff's claim is without merit and shall be dismissed.

Presiding Judge	Sungyop WOO
Judge	Hyounggeun LEE
Judge	Donggyu KIM

**PATENT COURT OF KOREA**  
**FOURTH DIVISION**  
**DECISION**

**Case No.** 2020Heo6101 Invalidation of Registration  
(Trademark)

**Plaintiff** A  
Representative B  
Counsel for Plaintiff  
Yoon & Yang LLC  
Attorneys Cheolgeun Lim, Changwoo  
Lee, Yesol Lee

**Defendant** C  
Counsel for Defendant  
Attorneys Museob Lee, Yeongseon  
Jeong

**Date of Closing Argument** April 23, 2021

**Decision Date** May 28, 2021

**ORDER**

1. The plaintiff's claim is dismissed.
2. The cost arising from this litigation shall be borne by the plaintiff.

**PLAINTIFF'S DEMAND**

The IPTAB Decision 2019Dang3027, decided July 28, 2020, shall

be revoked.

## OPINION

### 1. Basic Facts

#### A. Defendant's Registered Mark

1) Registration Number/ Filing Date of Application/ Date of Registration Decision/ Registration Date: No. 966852/ April 30, 2012/ April 22, 2013/ May 02, 2013

2) Mark at Issue: 

3) Designated Goods: Muesli, deep-dried sweet rice puffs (Gangjeong), confectionery, butter biscuit, biscuit under Class 30 of the Korean Classification of Goods

4) Right Holder: Defendant

#### B. Prior-used Marks

As stated in the appendix (hereinafter, the “prior-used mark ○” in accordance with the order of the appendix).

#### C. IPTAB Decision

1) The plaintiff requested a trial for invalidation of the registered trademark at issue against the defendant, arguing that the subject registered trademark falls under Articles 7(1)(x), 7(1)(xi), and 7(1)(xii) of the Old Trademark Act (before being amended by Act No. 12751 on June 11, 2014; hereinafter, the same shall apply) in relation

to the prior-used marks having an essential part called “Agimeal” which is remarkably recognized by consumers.<sup>1)</sup>

2) The IPTAB reviewed the above appeal under Case No. 2019Dang3027 and issued a decision to dismiss the plaintiff’s request for a trial on the ground that “the “Agimeal” part in the prior-used mark has little or no distinctiveness, and the plaintiff did not only use the “Agimeal” part in a trademark. Thus, it does not seem that consumers would separately recognize the “Agimeal” part from the prior-used marks and recognize the same as indicating the source of the plaintiff’s goods. Thus, it may not be deemed that the “Agimeal” part was recognized as indicating the source of the plaintiff’s goods, and the registered trademark at issue is not similar to the prior-used marks in terms of the mark, designated goods, or used goods, and share weak economic ties. Thus, the registered trademark at issue does not fall under the grounds for invalidation of registration as argued by the plaintiff on the following grounds: ① it may not be deemed that the registered trademark at issue would cause ordinary consumers to experience misconception or confusion as to a source of the goods; ② it may not be deemed that the registered trademark at issue is likely to deceive consumers; and ③ it may not be deemed that the defendant had fraudulent purposes at the time of application” (hereinafter, the “IPTAB Decision”).

**【Factual basis】** Undisputed facts, statements and images in plaintiff’s exhibits 1 through 7 (including exhibits with branching numbers, if any; hereinafter, the same shall apply unless specified otherwise), the purport of the overall argument

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1) The IPTAB did not specify the provisions applied. However, the former Trademark Act is applied according to the filing date of application (date of registration decision) for the Registered Trademark at Issue and Article 2 of the Addendum in the Revised Trademark Act.

## 2. Parties' Arguments

### A. Summary of the Plaintiff's Argument

On the following grounds, the registered trademark at issue falls under Article 7(1)(x), 7(1)(xi), or 7(1)(xii) of the Old Trademark Act in its relation to the prior-used marks, and thus its registration shall be invalidated. The IPTAB erred in its decision and shall not be upheld.

1) Whether the Registered Trademark at Issue falls under Article 7(1)(x) of the Old Trademark Act

a) Of the prior-used marks, the "Agimeal" part is a newly coined word combining "agi" and "meal", which is a Korean transliteration of "meal" meaning something to eat. The "Agimeal" part could be viewed as implying baby food, which is one of the designated goods. However, it may not be a trademark that makes consumers instinctively conceive it as baby food, which is the use of the goods.

b) Otherwise, the plaintiff has acquired the distinctiveness of "Agimeal" based on the following uses. In other words, the plaintiff has used the prior-used marks including the text "Agimeal" on the goods, such as "lacteal flour for babies, baby food," etc., since August 1970. Also, since 1985, the plaintiff filed an application and registered the prior-used marks including the letter "Agimeal" and used the same on various goods, such as lacteal flour, baby foods, confectionery, beverages, etc., for babies and infants. In addition, the plaintiff advertised such products, paying a large sum of advertising costs, and sold such products in large quantities. Through these processes, the "Agimeal" became a well-known and famous trademark significantly recognized not only among the consumers of used goods but also by the general public.

c) The registered trademark at issue is similar to "Agimeal"

as a mark. Even if the goods on which the prior-used marks are used are not similar to the designated goods of the registered trademark at issue, the registered trademark at issue may mislead and confuse the public about the source of goods on which the mark is used due to business diversification, famousness of the “Agimeal” mark, etc.

2) Whether The Registered Trademark at Issue Falls under Article 7(1)(xi) of The Old Trademark Act

The registered trademark at issue is similar to “Agimeal,” which is a famous mark. Also, the designated goods of the registered trademark at issue have an economically relevant relationship with the goods on which the prior-used marks are used (confectionery for babies and infants, biscuit products), thus raising the possibility of deceiving consumers.

3) Whether The Registered Trademark at Issue Falls under Article 7(1)(xii) of The Old Trademark Act

The registered trademark at issue is similar to “Agimeal,” which is known to consumers as an indicator of the source of the plaintiff’s goods. Also, the designated goods of the registered trademark at issue and the goods on which the prior-used marks are used share an economically relevant relationship. Therefore, the registered trademark at issue is a mark that the defendant uses for fraudulent purposes.

**B. Summary of the Defendant’s Arguments**

On the following grounds, Articles 7(1)(x), 7(1)(xi), and 7(1)(xii) of the Old Trademark Act are not valid grounds for the registered trademark at issue in relation to the prior-used marks:

1) Whether The Registered Trademark at Issue Does Not Fall under Article 7(1)(x) of The Old Trademark Act

## PATENT COURT DECISIONS

a) “Agimeal” is not distinctive as a mark indicating the use of the goods when the designated goods or used goods are baby foods as it is a generic wording or a commonly used mark.

b) The plaintiff only applied and registered prior-used marks in which other elements of the trade name and the “Agimeal” part are combined in various ways but not a mark consisting only of “Agimeal” or used “Agimeal” with exclusionary implementation. Therefore, “Agimeal” did not acquire distinctiveness based on its use, either.

c) The registered trademark at issue is not similar to the prior-used marks. Also, the designated goods for the registered trademark at issue are not similar to the used goods of the prior-used marks. Thus, it may not be deemed that the registered trademark at issue constitutes a mark that is likely to cause confusion about the source of the goods.

### 2) Whether The Registered Trademark at Issue Does Not Fall under Article 7(1)(xi) of The Old Trademark Act

Since “Agimeal” is not distinctive such that it can be recognized as indicating the source of the goods of the owner of the mark and the registered trademark at issue is not similar to the prior-used marks, and also, the designated goods have a weak economically relevant relationship with the used goods, the registered trademark at issue does not constitute a trademark that is likely to deceive consumers.

### 3) Whether The Registered Trademark at Issue Does Not Fall under Article 7(1)(xii) of The Old Trademark Act

“Agimeal” is not distinctive such that it can be recognized as indicating the source of the goods of the owner of the mark. Further, the registered trademark at issue is not similar to the prior-used marks in terms of the mark. Also, the registered trademark at issue is not a

mark that the defendant uses for unjust purposes for fraudulent purposes such as harming the plaintiff, etc.

### **3. Whether The “Agimeal” Mark Is Distinctive**

As each of the plaintiff’s above arguments premise that the “Agimeal” part of the prior-used marks acquired central distinctiveness, the examination of the “Agimeal” part shall be made first.

#### **A. Inherent Descriptiveness of the “Agimeal” mark**

“Agimeal” is composed of “agi,” meaning “a baby who is in a phase to be breastfed”, and “meal,” which is a Korean transliteration of “meal,” meaning something to eat. On the other hand, the type and description of foods that a “baby who is in a phase to be breast-fed” could eat are limited to baby food, etc. Thus, where the “Agimeal” mark is used in “baby foods, etc.,” it is understood instinctively to represent uses of the goods, such as a “meal of baby in a phase to be breast-fed (baby food, etc.)” Therefore, the mark has little or no distinctiveness. Also, compared to other elements, in the prior-used marks, the “Agimeal” part is in the same font with the same or a slightly different size. Thus, its appearance and typical use would not attract special attention from the general public with ordinary attention. Ultimately, in the prior-used marks, the “Agimeal” part has no or weak distinctiveness as a descriptive mark.

#### **B. Whether “Agimeal” Acquires Distinctiveness Based on Use**

##### **1) Related Legal Principles**

In the case of a mark which has no distinctiveness and thus is not

## PATENT COURT DECISIONS

suitable to be exclusively used by a particular person, the acquisition of distinctiveness based on use may be acknowledged, provided that the mark comes to be recognized by consumers as indicating the goods of a particular person in light of the following: the length, frequency, and continuity of use of the mark; the quantity of production and sales and market share of the goods to which the mark is affixed; the method, frequency, content, period of, and amount spent for its advertisement and promotion; the quality of the goods; the reputation and credit of the users of the mark; and the degree and modality of any competition in using the mark (Supreme Court Decision 2015Hu2174, decided September 12, 2017).

### 2) Established Facts

#### a) Plaintiff's Establishment and Details, etc., of Use of The Prior-used Marks for Baby Food Products

(1) On August 20, 1970, the plaintiff was established as a company named D Co., Ltd. and produced wholesome baby foods. In February 1997, the plaintiff changed the company name to the current "A Co., Ltd."

(2) From August 20, 1985 to September 24, 2003, the plaintiff filed an application for the prior-used marks that included the text "Agimeal" as stated in the appendix and obtained the registration thereof (hereinafter, the baby food products that the plaintiff manufactures and sells using the prior-used marks shall be referred to as the "Agimeal baby food products"). Of these, prior-used mark 5 (아기밀 GOLD), prior-used mark 6 (진품 유기농 아기밀), and prior-used marks 2 (아기밀골드), 3 (아기밀플러스), and 7 (아기밀옴티마) were extinguished due to the expiration of duration on December 03, 2012, May 28, 2014, and November 17, 2014, respectively.

(3) The plaintiff released its products as follows: “Agimeal” in August 1970; “Agimeal F” in August 1985; “Agimeal Gold” in June 1989; “Agimeal Jamjam” in January 1992; “Agimeal Optima” in September 1993; “Agimeal Babyrusso” in October 1994; “Agimeal Fresh” in March 1995; “F Agimeal” in February 1997; “F Agimeal S” in April 1998; “F Choyumeal” in January 2000; “Agimeal Upgrade Moa” in April 2000; “F Bunyu/Trumam” in July 2000; “Agimeal Choice” in May 2002; “F Sanyangbunyu” in May 2003; “F Hikid” and “F Trumam Nyuclass” in October 2003; “Agimeal Sunyuginong” in November 2003; “Choyumeal Plus” in July 2004. 7; “Ddeomeokneun Agimeal Nyamnyam” in September 2005; “Yuginong Agimeal” in February 2006; and “Agimeal Homkuk” in July 2013 (Plaintiff’s Exhibits 4 to 6). “E” or “F”, “A” was marked together with L on the plaintiff’s Agimeal baby food products as follows;

August 1970 Agimeal		August 1985 Agimeal F		June 1989 Agimeal Gold	
January 1992 Agimeal Jamjam		September 1993 Agimeal Optima		October 1994 Agimeal Babyrusso	
March 1995 Agimeal Fresh		February 1997 F Agimeal		April 1998 F Agimeal S	
April 2001 Agimeal Upgrade Moa		May 2002 Agimeal Choice		November 2003 Agimeal Sunyuginong	
September 2005 Ddeomeokneun Iyusik Agimeal Nyamnyam		February 2006 Yuginong Agimeal			

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(4) The following table shows the plaintiff’s sales of Agimeal baby food products, such as “Yuginong Agimeal (level 1-3),” “New Yuginong Agimeal (level 1-3),” “Agimeal Sunyuginong,” etc. from January 2005 to May 2013 around the time when the registered trademark at issue was registered (Plaintiff’s Exhibit 14). (Whether the registered trademark at issue has grounds for invalidation of registration as provided by Article 7(1)(x) or 7(1)(xii) of the Old Trademark Act shall be determined based on the registration date while Article 7(1)(xi) is based on the time when the decision to register was made. Therefore, the following are not taken into account: the details of the use of the prior-used marks since June 2013, which is later than the date when the decision to register was made; advertising of Agimeal Nyamnyam confectionery, such as “Agimeal Nyamnyam Yuginong Ssalgwaja,” etc., released thereafter (page 15, 16, 19, and 20 in Plaintiff’s Exhibit 18); awards (Plaintiff’s Exhibit 22) and sales (KRW 6,904,424 (12,240 pieces) around June 2013, KRW 5,280,999 (10,192 pieces) around July 2013, KRW 6,964,434 (13,003 pieces) around August 2013, etc.)

Period	Quantity	Sales (KRW)
Jan. 2005 – Dec. 2005	122,943	2,392,330,459
Jan. 2001 – Dec. 2006	247,002	1,894,913,231
Jan. 2007 – Dec. 2007	106,884	1,369,396,971
Jan. 2008 – Dec. 2008	72,914	1,003,684,652
Jan. 2009 – Dec. 2009	40,718	374,791,638
Jan. 2010 – Dec. 2010	7,122	92,231,096
Jan. 2011 – Dec. 2011	3,883	36,385,740
Jan. 2012 – Dec. 2012	-43	-701,000
Jan. 2013 – May 2013	-64	-594,356
Total	601,359	7,162,438,431

(5) The following table shows terrestrial television advertising of Agimeal baby food products, such as “E Agimeal,” “Wholesome Baby Food Agimeal F,” “Agimeal Soybean Milk,” “Agimeal Gold,” “Agimeal Plus,” “Agimeal Fresh,” “Agimeal Beibi

Jus,” “Agimeal S1, S2, S3,” etc., for 28 years from 1978 to 2006. In addition, the plaintiff advertised Agimeal baby food products through media, such as radio, cable TV, newspaper, magazine, etc. From 2000 to 2006, the plaintiff conducted the advertising of Agimeal baby food products by paying the following: KRW 16.6 billion for terrestrial television advertising; KRW 600 million for radio advertising (Plaintiff’s Exhibits 15 and 16); KRW 888.27 million for terrestrial television advertising for “F Agimeal products” (Plaintiff’s Exhibits 15 and 16). “E,” “F,” etc., were marked together with the prior-used marks in the terrestrial television advertising screens of the plaintiff’s Agimeal baby food products as shown in the following table.

<p>E Agimeal (1978) p. 1 in plaintiff’s Exhibit 15</p>	<p>Agimeal F (1985) p. 4 in plaintiff’s Exhibit 15</p>	<p>Agimeal Gold (1989) p. 9 in plaintiff’s Exhibit 15</p>
<p>Agimeal Plus (1992) p. 13 in plaintiff’s Exhibit 15</p>	<p>Agimeal Fresh (1993) p. 14 in plaintiff’s Exhibit 15</p>	<p>F Agimeal S1, S2, S3 (1999) p. 16 in plaintiff’s Exhibit 15</p>

(6) Until 2006, the plaintiff had broadcast the following advertisements: “2000 Agimeal Upgrade G Spouse”; “2001 Agimeal Upgrade H”; “2002 Agimeal Upgrade I”; “2003 Agimeal Choice I”; “2004 Agimeal Sunyuginong J Spouse”; “2004 Agimeal Upgrade Moa I”; and “2006 Agimeal Series K”. Since then, the plaintiff advertised only goods on which other marks were used, such as “Choyumeal Plus”, “Hikid”, “Trumam”, “Sanyanguasik”, etc. Further, there is no material to show that the plaintiff continued to advertise Agimeal baby

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food products (pages 17 to 19 in Plaintiff's Exhibit 15).

 <p>2019 노블커피 감수진 인터뷰 영상</p> <p><input type="button" value="비 다운"/> <input type="button" value="보기"/></p>	 <p>2019 노블커피 감수진 메이강필름</p> <p><input type="button" value="비 다운"/> <input type="button" value="보기"/></p>	 <p>2018 카카오닙스차 한혜진편</p> <p><input type="button" value="비 다운"/> <input type="button" value="보기"/></p>	 <p>2018 노블 스틱커피 이송진편</p> <p><input type="button" value="비 다운"/> <input type="button" value="보기"/></p>
 <p>2018 노블 컵커피 이송진편</p> <p><input type="button" value="비 다운"/> <input type="button" value="보기"/></p>	 <p>2017 노블 컵커피 이송진편</p> <p><input type="button" value="비 다운"/> <input type="button" value="보기"/></p>	 <p>2014 트루맘A</p> <p><input type="button" value="비 다운"/> <input type="button" value="보기"/></p>	 <p>2014 트루맘B</p> <p><input type="button" value="비 다운"/> <input type="button" value="보기"/></p>
 <p>2012 트루맘</p> <p><input type="button" value="비 다운"/> <input type="button" value="보기"/></p>	 <p>2012 산양유아식</p> <p><input type="button" value="비 다운"/> <input type="button" value="보기"/></p>	 <p>2011 트루맘</p> <p><input type="button" value="비 다운"/> <input type="button" value="보기"/></p>	 <p>2011 산양유아식</p> <p><input type="button" value="비 다운"/> <input type="button" value="보기"/></p>
 <p>2009 트루맘 뉴클레스 켄흥은희편</p> <p><input type="button" value="비 다운"/> <input type="button" value="보기"/></p>	 <p>2009 트루맘 뉴클레스 켄박주미편</p> <p><input type="button" value="비 다운"/> <input type="button" value="보기"/></p>	 <p>2009 초유닐은 코코랑</p> <p><input type="button" value="비 다운"/> <input type="button" value="보기"/></p>	 <p>2008 트루맘 뉴클레스 켄박주미편</p> <p><input type="button" value="비 다운"/> <input type="button" value="보기"/></p>
 <p>2007 트루맘 뉴클레스 최은경편</p> <p><input type="button" value="비 다운"/> <input type="button" value="보기"/></p>	 <p>2007 초유닐플러스카드</p> <p><input type="button" value="비 다운"/> <input type="button" value="보기"/></p>	 <p>2006 하이키토 김미숙편</p> <p><input type="button" value="비 다운"/> <input type="button" value="보기"/></p>	 <p>2006 하이키토 김미숙1편</p> <p><input type="button" value="비 다운"/> <input type="button" value="보기"/></p>
 <p>2006 트루맘 최은경편</p> <p><input type="button" value="비 다운"/> <input type="button" value="보기"/></p>	 <p>2006 아기밀시리즈 최은경편</p> <p><input type="button" value="비 다운"/> <input type="button" value="보기"/></p>	 <p>2006 산양유아식 최은경편</p> <p><input type="button" value="비 다운"/> <input type="button" value="보기"/></p>	 <p>2006 뉴트루맘 뉴클레스</p> <p><input type="button" value="비 다운"/> <input type="button" value="보기"/></p>

pp. 17 to 18 in Plaintiff's Exhibit No.15

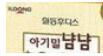
(7) Until around the filing date of the application and the date of the registration decision for the registered trademark at issue, the followings were posted in L cafe, an Internet portal site: “May I feed the Agimeal to a baby born in February” (dated December 08, 2008); “How to make a baby have Agimeal???” (dated December 25, 2008); “My baby only likes Agimeal but not powdered milk” (dated April 26, 2004); and “Super simple sweet potato added with Agimeal” (dated May 29, 2006).

b) Release, Sales Details, etc., of Plaintiff’s Agimeal Nyamnyam Confectionery Products

(1) From 2005 to the date of registration of the subject trademark, the plaintiff released confectionery products as follows: in October 2005, “Agimeal Nyamnyam Calcium Senbei” (Item No. S0056 (3602101); hereinafter, where an Item No. is modified, what is between the parentheses is the Item No. before the modification), “Agimeal Nyamnyam Cheese Biscuit” (S0058 (3602103)), “Agimeal Nyamnyam Wafers” (S0057 (3602102)), and “Agimeal Nyamnyam Gyeranbol” (S0059 (3602104)); in January 2006, “Agimeal Nyamnyam Tising Biscuit” (S0054 (3601102)), and “Agimeal Nyamnyam Finger Biscuit” (S0055 (3601202)); in November 2007, “Agimeal Nyamnyam Parae Senbei” (S0086 (3602105)); in July 2008, “Agimeal Nyamnyam Hobakdanggeun Biscuit” (S0171); in February 2009, “Agimeal Nyamnyam Danggeun Broccoli Senbei” (S0175); in July 2009, “Agimeal Nyamnyam Senbei 3 Type Set” (S0188); in May 2010, “F Agimeal Nyamnyam Choyu Wafers” (J0475), “Agimeal Nyamnyam Biscuit 3 Types Set” (S0235); in August 2011, “Agimeal Nyamnyam Calcium Wafers” (J0669), “Agimeal Nyamnyam DHA Wafers” (J0668), “Agimeal Nyamnyam Vitamin Maeul Alphabet Chingudeul” (J0678), and “Agimeal Nyamnyam Vitamin Maeul Mulgogi Chingudeul” (J0679) (hereinafter, the confectionery products above shall be referred to as the “Agimeal Nyamnyam confectionery products”).

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(2) The plaintiff's Agimeal Nyamnyam confectionery products display marks including the text "Agimeal Nyamnyam"

( , , ,  ) together with the plaintiff's company name L (hereinafter, these marks shall be referred to as the "Agimeal Nyamnyam mark").

<p>October 2005 Agimeal Nyamnyam Calcium Senbei, Cheese Biscuit, Wafers, Gyeranbol</p> 	<p>October 2005 Agimeal Nyamnyam Yeoneo Miyeok Honhap Juk, etc.</p> 
<p>May 2009 Agimeal Nyamnyam Senbei 3 Type Set</p> 	<p>May 2010 Agimeal Nyamnyam Choyu Wafers</p> 
<p>August 2011 Agimeal Nyamnyam Calcium Wafers, DHA Wafers, Vitamin Maedul Alphabet Chingudeul, Vitamin Maedul Mulgogi Chingudeul</p> 	

(3) The table below illustrates the detailed quantity and

sales of the plaintiff's Agimeal Nyamnyam confectionery products except returns (Plaintiff's Exhibit 14) as follows: KRW 185,997,322 (60,147 pieces) in 2005; KRW 782,338,370 (251,717 pieces) in 2006; KRW 570,824,721 (202,800 pieces) in 2007; KRW 572,956,172 (207,479 pieces) in 2008; KRW 625,453,122 (200,363 pieces) in 2009; KRW 943,072,104 (320,048 pieces) in 2010; KRW 1,576,752,976 (614,476 pieces) in 2011; KRW 1,476,929,285 (637,510 pieces) in 2012; KRW 517,510,529 (224,942 pieces) in 2013; and in total, KRW 7,251,834,601 (2,719,482 pieces).

Sales Period	Product Name	Item No.	Quantity (Pieces)	Sales (KRW)
Oct. 2005 - May 2013	Agimeal Nyamnyam Calcium Senbei	S0056 (3602101)	388,584	1,117,831,975
	Agimeal Nyamnyam Wafers	S0057 (3602102)	56,480	163,852,695
	Agimeal Nyamnyam Cheese Biscuit	S0058 (3602103)	213,337	624,707,193
	Agimeal Nyamnyam Gyeranbol	S0059 (3602104)	279,730	810,531,633
Jan. 2006 - Dec. 2008	Agimeal Nyamnyam Tising Biscuit	S0054 (3601102)	43,729	133,787,146
	Agimeal Nyamnyam Finger Biscuit	S0055 (3601202)	23,991	92,158,241
Nov. 2007 - May 2013	Agimeal Nyamnyam Parae Senbei	S0086 (3602105)	157,039	459,617,375
Jul. 2008 - Feb. 2013	Agimeal Nyamnyam Hobakdanggeun Biscuit	S0171	117,755	344,922,166
Feb. 2009 - Jul. 2012	Agimeal Nyamnyam Danggeun Broccoli Senbei	S0175	908	2,586,690
Jul. 2009 - Jun. 2010	Agimeal Nyamnyam Senbei 3 Type Set	S0188	37,901	137,629,340

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Sales Period	Product Name	Item No.	Quantity (Pieces)	Sales (KRW)
May 2010 - May 2013	Agimeal Nyamnyam Choyu Wafers	J0475	416,726	990,104,295
	Agimeal Nyamnyam Biscuit 3 Type Set	S0235	78,607	271,214,813
Jun. 2011 - May 2013	Agimeal Nyamnyam Calcium Wafers	J0669	410,975	955,683,698
	Agimeal Nyamnyam DHA Wafers	J0668	349,701	804,378,373
	Agimeal Nyamnyam Vitamin Maedul Alphabet Chingudeul	J0678	78,354	183,484,047
	Agimeal Nyamnyam Vitamin Maedul Mulgogi Chingudeul	J0679	65,665	159,344,921
Total			2,719,482	7,251,834,601

(4) The plaintiff did not advertise Agimeal Nyamnyam confectionery products through media, such as terrestrial or cable televisions, radio, etc. (the details of advertising cost (Plaintiff’s Exhibit 16) specify the advertising cost as “0”). However, the plaintiff made newspaper and magazine advertisements, containing the following pictures by paying a total of KRW 300 million from 2005 to 2019 (Plaintiff’s Exhibits 15 and 16).



Magazine advertisements of Agimeal Nyamnyam confectionery products around September 2005 (pages 10 to 12 in Plaintiff’s Exhibit 18)

c) Findings of Consumer Survey for Agimeal mark by Plaintiff  
(Plaintiff's Exhibit 17)

(1) From November 19 to 26, 2020, the plaintiff conducted a consumer survey (hereinafter, the "Survey at Issue") for the recognition of the "Agimeal" mark among 502 women aged 25-54 having children and residing in Seoul, Incheon, Busan, Daegu, Gwangju, or Daejeon Cities. The survey was conducted in the form of "Computer Aided Web Interview" in which the Korea Research extracts, from panel groups, respondent samples of a female group with a child in proportion to their ages and regions and have the respondent samples participate in the survey by accessing through links in email or text message.

(2) The survey questionnaire (pages 18 to 25 in Plaintiff's Exhibit 17) contained the "brand awareness" item in Question L as to gender, age, region, marital status, childbirth, primary caregiver, etc. The results of the responses of consumers are as stated below. The following questions are for all 504 respondents.

//Brand awareness//

B1. Have you ever known or heard of "Agimeal", which is a baby food brand (trademark)?

There is no right or wrong answer. I thank you for replying frankly.

1. Yes
2. No

[Logic: B1=1 Respondent]

B2. How did you come to know of "Agimeal"? Please select all channels through which you came to know of "Agimeal." (Plural) (Random)

1. TV advertisement
2. Newspaper/magazine advertisement
3. Online (Internet) advertisement
4. Articles in newspaper, magazine, internet, etc.
5. Family member/acquaintance
6. Comment about products on Internet (Internet community, mom cafe, etc.)
7. Consultancy/recommendation of doctor or nurse in pediatrics/

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obstetrics

8. Social Media (Instagram, Facebook, etc.)
9. Offline store display/recommendation of sales clerk
10. Others ( ) (random fixation)

[Logic: B1=1 Respondent]

B3. Have you ever purchased “Agimeal” products while rearing your child?

1. Yes
2. No

[Logic: B3=1 Respondent]

B4. If so, where did you purchase “Agimeal” products? Please select all places concerned.

(Plural) // Random between set 1 (Examples 1-6) and set 2 (Examples 7-11), Random in each set as well//

1. Department store
2. Large discount store (Emart, Homeplus, Lotte Mart, etc.)
3. Large supermarket, SSM (Emart Everyday, Homeplus Express, Lotte Super, etc.)
4. Mom-and-pop store
5. Hospital/pharmacy/postnatal care center
6. Baby fair
7. Open-market site/App. (Auction, 11st street, G-market, etc.)
8. Social commerce site/App. (Coupang, We Make Price, Ticket Monster, etc.)
9. Portal site shopping channel/App (Naver Smart Store, Kakao Shopping How, etc.)
10. Brand website/App.
11. TV home shopping
12. Others ( ) (Random fixation)

[Logic: B1=1 Respondent]

B5. What company do you understand “Agimeal,” a baby food brand (trademark), to belong to? (Singular) (Random)

1. Ildong Food Is
2. Namyang
3. Maeil

- 4. Pasteur
- 5. LG Household & Health Care
- 6. Bebecook
- 7. Pulmuone
- 8. Others ( ) (Random fixation)
- 9. Do not know (Random fixation)

① As to the question “Have you ever known or heard of “Agimeal,” which is a baby food brand (trademark)? Since there is no right or wrong answer, please be honest with the answers,” 78% of respondents replied that they recognize the “Agimeal” mark.

② As to the question that “what do you value when purchasing powdered milk, baby foods, baby snacks, etc? Please select three in the order you value the most,” 39%, 17%, 13%, and 9% of respondents choose “containing beneficial ingredients,” “use of organic farming ingredients,” “brand and manufacturer,” and “containing allergenic ingredients,” respectively.

Item	Proportion
Number of respondents	(502)
Inclusion of beneficial ingredients	39 70
Use of organic farming ingredients	17 42
Brand and manufacturer	13 39
Inclusion of allergenic ingredients	9 35
Place of origin	8 28
Overall flavor, scent, texture, etc.	6 24
Price	5 34
Production method	2 18
Capacity	1 7
Design of container/package	0 2
Palatability/digestibility	0 0
Inclusion of toxic substance	0 0
Recommendation of acquaintance	0 0

Page 13 in Plaintiff’s Exhibit 17

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(3) The following questions were prepared only for the 394 respondents who replied that they know of Agimeal.

① As to the question “How did you come to know of “Agimeal”? Please select all channels through which you came to know of “Agimeal,” 39%, 33%, 30%, 23%, 23%, 21%, 17%, 11%, and 6% of respondents selected “TV advertisement,” “Offline store display/recommendation of a sales clerk,” “Online (Internet) advertisement,” “Comment about products on Internet (Internet community, mom cafe, etc.),” “Family members/acquaintance,” “Articles in a newspaper, magazine, the internet, etc.,” “Newspaper/magazine advertisements,” “Social Media (Instagram, Facebook, etc.),” and “Consultancy/recommendation of a doctor or a nurse in pediatrics/obstetrics,” respectively.

② As to the question “What company do you understand “Agimeal,” a baby food brand (trademark), to belong to?,” 52%, 12%, and 7% of respondents replied that the plaintiff, “E”, and “Maeil,” respectively.

③ As to the question “Have you ever purchased “Agimeal” products while rearing your child?,” 49% of respondents replied that they have purchased “Agimeal” products.

④ As to the offline purchase channels of consumers who replied that they have purchased “Agimeal” products, 72%, 27%, 7%, and 21% selected “large discount store,” “large supermarket and SSM,” “baby fair,” and “mom-and-pop store,” respectively. Further, as to online purchase experience, 19%, 14%, 6%, 4%, and 2% selected “open market site/apps,” “social commerce site/apps,” “portal site shopping channels,” “brand web-sites,” and “TV home shopping,” respectively.

d) Plaintiff’s Attempt to File Application And The Following Decision to Reject, etc.

(1) KIPO rejected the application on the ground that a mark which expressed the English text of “MAEIL AKIMEAL” under

the text of “Maecil Akimeal” (whose designated goods are baby foods made from agricultural products in Class 2 under the Category of Goods) is similar to the plaintiff’s “Agimeal F,” which is a cited mark (whose designated goods are baby foods made from agricultural products in Class 2 under the Category of Goods), and M. Co., Ltd. appealed filed an administrative appeal regarding the rejection with the Board of Patent Appeals and Interferences under Case No. 87Hangwon595. On August 31, 1988, the KIPO Board of Patent Appeals and Interferences reversed the original rejection on the ground that “Agimeal means a meal that babies consume. In cases where its designated goods are baby foods made from agricultural products, it has no distinctiveness. Since the claimed mark and the cited mark are recognized by ‘MAEIL’ and ‘F,’ respectively, they are not similar” and decided that the claimed trademark at issue shall be registered (Defendant’s Exhibit 5). Accordingly, this decision became final and conclusive.

(2) On August 31, 2002, the plaintiff filed an application for the mark consisting of “Agimeal” with designated goods of baby foods made from agricultural products, etc., in Class 5 and powdered milk (excluding for babies) in Class 29 under the Category of Goods (Application No. 40-2002-0039905), but its registration was rejected. Its details are as stated in L.

① As to the application stated above, an examiner of KIPO notified, on September 22, 2003, the plaintiff of a ground for rejection that “the claimed mark is a commonly used mark in relation to the designated goods and means the “food that babies eat.” Thus, where it is used on the designated goods, it expresses the nature of the goods (use, etc.)” (Defendant’s Exhibit 6-1).

② On December 22, 2003, the plaintiff deleted all designated goods except baby foods made from agricultural products, baby foods made from livestock products, powdered milk for babies, and baby foods made from aquatic products in Class 5 and powdered milk (except for babies) in Class 29 under the Category of Goods and

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submitted a written statement that the claimed mark is not commonly used on goods and, since 1970, has acquired distinctiveness based on use by the plaintiff, together with advertising materials, newspaper advertising materials, and the internet data.

③ On February 19, 2004, an examiner of KIPO rejected the claimed mark on the ground that even if the written statement was examined again, the ground for rejection was not resolved in its entirety (Defendant's Exhibit 6-3). As the plaintiff did not appeal the rejection, it became final and conclusive without change. An attorney for the plaintiff stated that since the plaintiff thought that the "Agimeal" mark would acquire distinctiveness based on use over time, it did not appeal the rejection (Defendant's Exhibit 6-3) on the first date of the pleadings.

(3) M Co., Ltd. filed, on March 06, 1986, an application for the mark " (Registration No. 153358)" with designated goods in Class 7 under the Category of Goods and obtained registration thereof on November 20, 1990. Also, M Co., Ltd. filed, on October 26, 1989, an application for the mark " (Registration No. 205337)" with the designated goods in Class 5 under the Category of Goods and obtained registration thereof on November 20, 1990. (The trademark rights for these two registered marks were extinguished by expiration of duration (Defendant's Exhibit 7; hereinafter, the "MAEIL AGIMEAL mark").

**【Factual basis】** Undisputed facts, statements and images in the plaintiff's exhibits 4 to 7, and 14 to 22 and the defendant's exhibits 4 to 7, and 14 to 22, and the purport of the overall argument

### 3) Discussion

In light of the facts, such as L, etc., examined above, it may not be deemed that, in the prior-used marks, the "Agimeal" part acquired

distinctiveness based on use as of the filing date or the date when the registration decision was made for the registered trademark at issue.

a) The plaintiff did not register or use a mark composed only of “Agimeal” but registered and used the prior-used marks to which the text or design like L is added. In other words, prior-used marks 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, and 14 are composed of “,” “골드,” “프레스,” “후레쉬 FRESH,” “GOLD,” “진품 유기농,” “옵티마,” “하이큐 AKEA MEAL HIGH-Q,” “마드레,” “종합영양이유식,” and the plaintiff’s company name “후디스,” the plaintiff’s company names “후디스” and “명품,” the plaintiff’s company names “후디스” and “업그레이드 UPGRADE,” the plaintiff’s company names “후디스” and “닥터,” the figure “,” the plaintiff’s company name “후디스,” and the text “,” respectively.

b) In the prior-used marks, the “Agimeal” part represents the usage, etc. of the used goods as examined above and thus has little or no distinctiveness. This means that the part alone is unlikely to cause ordinary consumers to get an impression or remember and associate the mark, functioning as an essential part, serving as a source identifier or that it could be recognized separately from the prior-used marks. Furthermore, it does not seem necessary to consider the parts, for example, the company name, etc., added the above as commonly used mark in baby foods, etc. Also, the font, size, etc., of “Agimeal” are not so peculiar as to be able to maintain its independence and be recognized separately compared with other text parts in the prior-used marks. Thus, it may not be said, as the plaintiff argues, that the distinctiveness of the “Agimeal” part is reinforced by the use,

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advertising, etc., of the prior-used marks.

c) In expressing the prior-used marks of Agimeal baby food products or advertisement, etc., thereof, the plaintiff continued to write “F,” which is its company name, or “E,” which is its predecessor, and placed them at the top-front of products or near the prior-used marks to draw all consumers’ attention. Accordingly, it is highly likely that ordinary consumers would recognize, as indicating a source, not “Agimeal” with no or little distinctiveness, but “F” and “E,” which are company names.

In this respect, the plaintiff argues that product names (or trademarks) did not include “E” or “N,” and only a small number of product names contained “F,” and thus not “E” or “A” but “Agimeal” has central distinctiveness. However, in packaging, broadcasting advertisements, etc., of Agimeal baby food products, company names, such as “E,” “F,” etc., have been placed at the top-front, which could be observed and easily recognized as indicating a source for the ordinary consumers or traders as illustrated in the following:



, etc. It seems that these company names could indicate a source irrespective of the fact of whether the plaintiff included “E,” “N,” “F,” etc., in the product names or registered trademarks.

d) The plaintiff filed an application for the claimed mark with No. 40-2002-0039905, which is composed only of “Agimeal” and its English transliteration “Agimeal.” However, on February 19, 2004, the application was rejected on the ground that it was a descriptive mark without distinctiveness or failed to acquire the distinctiveness based on use. Also, the defendant did not register or use a mark composed only of “Agimeal” on its goods thereafter.

e) It seems that since 2006, immediately after the application for the claimed mark “Agimeal” was rejected, the plaintiff has mainly advertised its baby food products with separate brands, such as “Trumam” or “Sanyangyuasik,” but has not executed, for a long time, the ground television advertising for goods on which “Agimeal” was used. Even according to the data produced by the plaintiff, the sales of the Agimeal baby food products have decreased rapidly since 2008, and there is no sales data for 2012, in which only returns (43 items) are found.

f) An application for the registered trademark at issue was filed, and the registered trademark at issue was registered after more than 6 years had passed from when the above advertisement was stopped.

g) The findings of the Survey at Issue produced by the plaintiff are insufficient to acknowledge the distinctiveness of the “Agimeal” mark by use on the ground of L.

① The Survey at Issue was conducted after 7 years had passed from when it was decided to register the registered trademark at issue.

② Of the questions about the brand awareness, the first question “B1. Have you ever known or heard of “**Agimeal**,” which is a baby food brand (trademark)? Since there is no right or wrong answer, please be honest with the answer” premises that “**Agimeal**” is a “baby food brand (trademark).” The following questions also stress “**Agimeal**” with bold letters, thus the questions in the Survey at Issue imply that “Agimeal” indicates a source. Further, the question “B5. What company do you conceive “Agimeal,” a baby food brand (trademark), to belong to?” also premises that “Agimeal” is a “baby food brand (trademark)” but that it could not be known whether respondents perceive it as indicating a source of multiple subjects by being designed such that only one answer could be selected.

h) The “MAEIL AKIMEAL” mark of M Co., Ltd. has been

## PATENT COURT DECISIONS

used concurrently with the plaintiff's prior-used marks for a long time for identical or similar designated goods. Even according to the findings of the Survey at Issue, some relatively old consumers perceived "Agimeal" as a brand of "MAEIL." Hence, the plaintiff did not use "Agimeal" in a monopolistic and exclusive way. Even if the plaintiff argues that the "MAEIL AGIMEAL" mark has never actually been used, even Maeil Dairies confirmed the fact that the above mark has never been used since the 2000s (Plaintiff's Exhibit 28).

i) The plaintiff argues that since it has commonly used "Agimeal" mark when releasing various baby food products, such as powdered milk, baby foods, confectionery and beverages for babies and infants, etc., under the family brand of the brand "Agimeal," the brand "Agimeal" acquired distinctiveness based on use notwithstanding the fact that it was not used independently.

However, even as to goods, such as "confectionery and beverages for babies and infants," etc., the plaintiff only used marks to which its

company name or other element is added, such as,



 etc., but has never indicated "Agimeal" alone. The marks above combine "Agimeal" with "Beibi Jus," which is a Korean transliteration of "baby juice," meaning "juice that babies drink," or "Nyamnyam," which means "sound or state in which babies consume food with relish." However, since the "Agimeal" part and the above elements have no or little distinctiveness in relation to the used goods, the above marks would be observed as a whole. Ultimately, it may not be deemed that the distinctiveness of "Agimeal" would be reinforced by marks used in the goods, such as "confectionery and beverages for babies and infants," etc.

### **C. Summary of Discussion**

Of the prior-used marks, the “Agimeal” part is only a descriptive mark and has no or little distinctiveness. It may be deemed that the “Agimeal” part came to have distinctiveness by being recognized as a source identifier of goods among consumers or traders at the time when the application for the registered trademark at issue was filed or decided to be registered. Accordingly, it may not be viewed that, in the prior-used marks, the “Agimeal” part, as a part with central distinctiveness, was known as a source of goods of a specific individual at the time when the registered trademark was filed or decided to be registered.

### **3. Whether the Registered Trademark at Issue Falls under Article 7(1)(x) of the Old Trademark Act**

#### **A. Relevant Legal Principles**

If a trademark, prescribed in Article 7(1)(x) of the Old Trademark Act, when compared in composition and conception, is easily associated with others’ well-known trademarks or goods or recognized as having a close relation with others’ trademarks or goods, which can cause misconception and confusion about the origin of goods, the registration cannot be granted, even though those trademarks are not similar. (Supreme Court Decision 2001Hu2870, decided May 28, 2002). Here, a famous trademark is a mark not only widely known to the consumers of the designated goods but also gained an impression of high quality among the general public due to its superior quality and thus serves as a source indicator for the business. (Supreme Court Decision 2002Hu2563, decided July 09, 2004). Whether a mark is famous shall be judged from the period, frequency of use, and manner of the trademark or the commercial name adopted in the product or

## **PATENT COURT DECISIONS**

the business, trade volume of the products or the broadness of customer basis, and advertising practices of the mark or the commercial name as well as how widely known the source of the goods or the business is when objectively viewed under social norms in light of practicing of trading of goods. (Supreme Court Decision, 2006Hu3526, decided February 08, 2007). The reference point for determining whether another person's mark is famous shall be the time when the mark to be compared with was filed for registration. (Supreme Court Decision, 2002Hu628, decided September 26, 2003).

### **B. Discussion**

Of the prior-used marks, the "Agimeal" part is not distinctive in relation to the goods on which it was used. Also, it may not be deemed, as examined above, that the "Agimeal" part was known as indicating the source of the goods of other people. Accordingly, the plaintiff's argument that the registered trademark at issue falls under Article 7(1)(x) of the Old Trademark Act on the premise that the "Agimeal" part is famous is without merit and without further examination.

## **4. Whether the Registered Trademark at Issue Falls under Article 7(1)(xi) of the Old Trademark Act**

### **A. Relevant Legal Principles**

The purpose of Article 7(1)(xi) of the Old Trademark Act is not to protect existing trademarks but to protect the trust therein by preventing ordinary consumers to be misled or getting confused about the source of the goods, which use a mark recognized as belonging to a specified person. To what extent the existing marks or the used

goods thereof are known among purchasers or traders in the general market in Korea refers to an object state to be acknowledged by ordinary purchasers based on the practicing of trading goods (Supreme Court Decision 2006Hu3113, decided June 28, 2007). Any trademark that is likely to deceive consumers does not necessarily require a certain mark or the used goods thereof to be famous. However, the mark or the used goods thereof shall be known to be recognized as belonging to a specific person by consumers or traders in the general trades in Korea. In this case, if a mark identical or similar to the trademark is used for designated goods identical or similar to the used goods or if there is a special circumstance in which it may be misconceived that the mark is used by the right holder, it shall be deemed that it is likely to deceive consumers or mislead about the source. Meanwhile, when determining whether a mark is likely to deceive consumers, the reference point shall be the time when the mark was decided to be registered (Supreme Court Decision 2001Hu1884, 1891, decided April 08, 2003).

**B. Whether The Prior-used Marks Are Similar to The Registered Trademark at Issue**

As to prior-used marks 1 through 9 of the prior-used marks, they relate to “Agimeal F, Agimeal Gold, Agimeal Plus, Agimeal Fresh, Agimeal Optima, Agimeal Haique, and Agimeal Madre,” respectively, and are significantly different from the registered trademark at issue in terms of appearance, the number of characters, the contents of the text, etc. Also, since, in the prior-used marks, the “Agimeal” part has no or little distinctiveness, as examined above, this part may not be recognized as an essential part, and thus each mark above will be recognized and referred to as a whole. Therefore, they are not similar to the registered trademark at issue, perceived as and called “Aimeal” in terms of pronunciation and conception.

## PATENT COURT DECISIONS

Also, prior-used marks 10 to 14 are marks in which “F” is added before “Agimeal,” and the “F” part has a relatively strong distinctiveness as the source of goods. Thus, the registered trademark at issue will be perceived as and called “Aimeal.” On the other hand, the prior-used marks above will be called “F” or “F Agimeal.” Thus, they are different from each other in terms of appearance, name, and meaning.

Ultimately, it may not be deemed that the registered trademark at issue is similar to the prior-used marks in terms of appearance, name, and meaning.

### C. Discussion

As examined above, it may not be deemed that the registered trademark at issue is likely to deceive consumers causing misconception or confusion to the source in relation to the prior-used marks in light of the following: the fact that the registered trademark at issue is not similar to the prior-used marks as stated above; the facts established above; and the statements in the plaintiff’s exhibit 25.

1) Since “muesli, deep-dried sweet rice puffs, confectionery, butter biscuit, biscuit,” which are the designated goods of the registered trademark at issue, are favorite foods that replace or supplement staple foods, it seems that the ordinary consumers or traders would make much of sensory aspects, such as flavor, taste, texture, etc., or the quality of the food itself, such as nutrients, ingredients, etc., as much as a mark of the goods. It seems that consumers of the products on which the registered trademark at issue is used, such as confectionery for babies, snacks for babies, etc., would make much of nutrients, the origin of raw materials, production through organic farming, etc., in addition to a mark used on the goods (even according to the Survey at Issue, consumers of powdered milk, baby foods, and baby snacks replied that the following were elements that they make much of:

“whether the product contains beneficial ingredient (39%)”; “the use of organic farming ingredients (17%)”; and “the brand and manufacturer (13%)”, which accounted for relatively less).

2) The plaintiff marked the company name “E” and “A” together with “Agimeal” and “Agimeal Nyamnyam” in a conspicuous place at the front of Agimeal baby foods and Agimeal Nyamnyam confectionery product, respectively. The defendant also marked the defendant’s domain (O) as illustrated in the picture on the right, using the registered trademark at issue.



pp. 1-2 in Plaintiff’s Exhibit No. 25

#### D. Summary of Discussion

It may not be deemed that the registered trademark at issue falls under Article 7(1)(xi) of the Old Trademark Act without further examination.

### 5. Whether the Registered Trademark at Issue Falls under Article 7(1)(xii) of the Old Trademark Act

#### A. Relevant Legal Principles

The purpose of Article 7(1)(xii) of the Old Trademark Act is to not allow a trademark to be registered with an intent to inflict loss on the right holder of the trademark recognized by consumers in the Republic of Korea or overseas as indicating the goods of a specific person (hereinafter, the “Counterfeited Mark”), such as to obtain unjust profits

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by taking advantage of business reputation, etc., embodied in the Counterfeited Mark, damage a value of the Counterfeited Mark, interrupt the conduct of business in the Republic of Korea of the person having a right to the Counterfeited Mark, etc., as a third party registers and uses a trademark counterfeiting the Counterfeited Mark by taking advantage of the fact that the Counterfeited Mark is not registered in the Republic of Korea. Therefore, in order for a registered trademark to fall under this provision, the Counterfeited Mark shall be recognized as the mark of a specific person among consumers in Korea or overseas, and an applicant of the registered trademark shall use a mark identical or similar to the Counterfeited Mark for unjust purposes. Accordingly, ① it shall be determined whether the Counterfeited Mark is recognized as a trademark of a specific person among consumers in the Republic of Korea or overseas in light of the following: the period, manner, type, scope, the usage of the trademark, and the course of trade as well as how widely known it is when objectively viewed under social norms.; ② whether an applicant of a registered trademark has unjust purposes, shall be determined in light of the following: to what extent a trademark of a specific person is recognized and creative; to what extent the trademark of a specific person is identical or similar to the trademark of the applicant; whether the applicant negotiates with the specific person as to trademarks and the details thereof, if any; other relationships between the two parties; whether the applicant concretely prepared a business using the registered trademark; whether the goods are identical, similar, or economically related; the custom of trade, etc.; and ③ the determination above shall be made as of the filing of an application for the registered trademark (Supreme Court Decision 2011Hu3896, decided May 09, 2013).

## B. Discussion

1) Of the prior-used marks, the “Agimeal” part is not distinctive in relation to the used goods thereof, and it may not be deemed that it is a known source indicator of the goods of a specific person. Also, the prior-used marks cannot be observed or perceived separately only with the “Agimeal” part. Therefore, it is determined, as examined above, that the prior-used marks are different from the registered trademark at issue in terms of appearance, pronunciation, and conception.

2) Accordingly, it may not be deemed that the registered trademark at issue is identical or similar to the prior-used marks and thus the registered trademark at issue is not likely to cause confusion about a source.

3) The registered mark at issue may not be deemed to fall under Article 7(1)(xii) of the Old Trademark Act in relation to the prior-used marks without further examination.

## 6. Conclusion

The IPTAB did not err in its decision, as the plaintiff argues. The plaintiff’s claim to revoke the IPTAB decision on the premise that it shall not be upheld is without merit and is therefore dismissed.

Presiding Judge	Taeksoo JUNG
Judge	Juhyoung MUN
Judge	Soonmin KWON

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[Annex] Prior-used Marks

1) Prior-used Mark 1

- a) Registration Number/ Filing Date of Application/  
Registration Date/ Date of Renewal Registration:  
Trademark Registration No. 134547/ Aug. 20, 1985/ Dec.  
09, 1986/ Jul. 13, 2016

b) Mark at issue: 

- c) Designated goods: Baby food made from agricultural  
products in Class 5 under the Category of Goods
- d) Registration right holder: Plaintiff

2) Prior-used Mark 2 (expired)

- a) Registration Number/ Filing date of Application/ Date of  
Registration/ Date of Renewal Registration/ Date of  
Expiration: Trademark Registration No. 302081/ Oct. 12,  
1993/ Nov. 16, 1994/ Jul. 26, 2004/ Nov. 17, 2014

b) Mark at issue: 

- c) Designated goods
- Baby food made from agricultural products in Class 5  
under the Category of Goods
  - Milk powders processed from agricultural products,  
soybean milk, beans, vegetable soup and processed  
ginseng in Class 29 under the Category of Goods
  - Noodles, brown rice flour for food, and adlay flour for  
food in Class 30 under the Category of Goods
  - Vegetable juices for beverages in Class 32 under the  
Category of Goods

d) Registration right holder: Plaintiff

3) Prior-used Mark 3 (expired)

a) Registration Number/ Filing Date of Application/ Date of Registration/ Date of Renewal Registration/ Date of Expiration: Trademark Registration No. 302082/ Oct. 12, 1993/ Nov. 16, 1994/ Jul. 26, 2004/ Nov. 17, 2014

아기밀플러스

b) Mark at issue:

c) Designated goods

- Baby food made from agricultural products in Class 5 under the Category of Goods
- Milk powders processed from agricultural products, soybean milk, beans, vegetable soup, and processed ginseng in Class 29 under the Category of Goods
- Noodles, brown rice flour for food, and adlay flour for food in Class 30 under the Category of Goods
- Vegetable juices for beverages in Class 32 under the Category of Goods

d) Registration right holder: Plaintiff

4) Prior-used Mark 4

a) Registration Number/ Filing Date of Application/ Date of Registration/ Date of Renewal Registration: Trademark Registration No. 334003/ Jan. 16, 1995/ Feb. 21, 1996/ Feb. 22, 2016

아기밀 후레쉬

b) Mark at issue:

FRESH

c) Designated goods

- Baby food made from agricultural products in Class 5

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under the Category of Goods

- Milk powders processed from agricultural products, soybean milk, beans, vegetable soup, vegetable juice for cooking, and processed ginseng in Class 29 under the Category of Goods
- Noodles, brown rice flour for food, and adlay flour for food in Class 30 under the Category of Goods
- Vegetable juices for beverages in Class 32 under the Category of Goods

d) Registration right holder: Plaintiff

5) Prior-used Mark 5 (expired)

a) Registration Number/ Filing Date of Application/ Date of Registration/ Date of Expiration: Trademark Registration No. 536163/ Jan. 11, 2001/ Dec. 02, 2002/ Dec. 03, 2012

b) Mark at issue: **아기밀 GOLD**

c) Designated goods: Baby food made from agricultural products in Class 5 under the Category of Goods

d) Registration right holder: Plaintiff

6) Prior-used Mark 6 (expired)

a) Registration Number/ Filing Date of Application/ Date of Registration/ Date of Expiration: Trademark Registration No. 583511/ Dec. 31, 2002/ May 27, 2004/ May 28, 2014

b) Mark at issue: **진품 유기농 아기밀**

c) Designated goods: Baby food made from agricultural products

(limited to what is related to products produced with organic farming), lactose (limited to what is related to products produced with organic farming), baby food made

from livestock products (limited to what is related to products produced with organic farming), milk powder for baby (limited to what is related to products produced with organic farming), and baby food made from aquatic products (limited to what is related to products produced with organic farming) in Class 5 under the Category of Goods

d) Registration right holder: Plaintiff

7) Prior-used Mark 7 (expired)

a) Registration Number/ Filing Date of Application/ Date of Registration/ Date of Renewal Registration/ Date of Expiration:

Trademark Registration No. 302083/ Oct. 12, 1993/ Nov. 16, 1994/ Aug. 24, 2004/ Nov. 17, 2014

b) Mark at issue: 

c) Designated goods

- Baby food made from agricultural products, and milk powder processed from agricultural products in Class 5 under the Category of Goods
- Soybean milk, beans, vegetable soup, and processed ginseng in Class 29 under the Category of Goods
- Noodles, brown rice flour for food, and adlay flour for food in Class 30 under the Category of Goods
- Vegetable juices for beverages in Class 32 under the Category of Goods

d) Registration right holder: Plaintiff

8) Prior-used Mark 8

a) Registration Number/ Filing Date of Application/ Date of

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Registration/ Date of Renewal Registration: Trademark  
Registration No. 391888/ Nov. 09, 1996/ Jan. 20, 1998/  
Jan. 12, 2018

아기밀  
하 이 큐

b) Mark at issue: AKEA MEAL HIGH-Q

c) Designated goods

- Baby food made from agricultural products in Class 5 under the Category of Goods
- Milk powders processed from agricultural products (excluding for baby), soybean milk, frozen beans, beans preserved, vegetable soup, vegetable juice for cooking, and processed ginseng in Class 29 under the Category of Goods
- Noodles, brown rice flour for food, and adlay flour for food in Class 30 under the Category of Goods
- Fresh beans in Class 31 under the Category of Goods
- Vegetable juices for beverages in Class 32 under the Category of Goods

d) Registration right holder: Plaintiff

9) Prior-used Mark 9

a) Registration number/ Filing date of application/ Date of registration/ Date of renewal registration: Trademark Registration No. 395815/ Dec. 21, 1996/ Feb. 17, 1998/ Feb. 19, 2018

아기밀 마드레

b) Mark at issue:

c) Designated goods

- Baby food made from agricultural products, and milk

powder processed from agricultural products in Class 5 under the Category of Goods

- Milk powders processed from agricultural products (excluding for baby), soybean milk, beans preserved, vegetable soup, and processed ginseng in Class 29 under the Category of Goods
- Noodles, brown rice flour for food, and adlay flour for food in Class 30 under the Category of Goods
- Beans unpreserved in Class 31 under the Category of Goods
- Vegetable juices in Class 32 under the Category of Goods

d) Registration right holder: Plaintiff

10) Prior-used Mark 10

- a) Registration Number/ Filing Date of Application/ Date of Registration/ Date of Renewal Registration: Trademark Registration No. 465442/ Mar. 19, 1999/ Feb. 22, 2000/ Feb. 12, 2020

종합영양이유식

- b) Mark at issue: 후디스 아기밀
- c) Designated goods: Baby food made from agricultural products, baby food made from aquatic products, baby food made from livestock products, and mixed baby food made from agricultural, aquatic, and livestock products in Class 5 under the Category of Goods
- d) Registration right holder: Plaintiff

11) Prior-used Mark 11

- a) Registration Number/ Filing Date of Application/ Date of Registration/ Date of Renewal Registration: Trademark

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Registration No. 504322/ Jan. 20, 2000/ Oct. 23, 2001/  
Nov. 19, 2010

- b) Mark at issue: **후디스 아기밀 명품**
- c) Designated goods: Milk powder for baby, baby food made from aquatic products, baby food made from agricultural products, and baby food made from livestock products in Class 5 under the Category of Goods
- d) Registration right holder: Plaintiff

12) Prior-used Mark 12

- a) Registration Number/ Filing Date of Application/ Date of Registration/ Date of Renewal Registration: Trademark Registration No. 504327/ Feb. 11, 2000/ Oct. 23, 2001/ Nov. 19, 2010

**후디스 아기밀 업그레이드**

- b) Mark at issue: **UPGRADE**
- c) Designated goods: Baby food made from livestock products, milk powder for baby, and baby food made from aquatic products in Class 5 under the Category of Goods
- d) Registration right holder: Plaintiff

13) Prior-used Mark 13

- a) Registration Number/ Filing Date of Application/ Date of Registration/ Date of Renewal Registration: Trademark Registration No. 522654/ Jan. 29, 2001/ Jun. 11, 2002/ Sep. 29, 2011

- b) Mark at issue: **후디스 아기밀 닥터**
- c) Designated goods: Baby food made from agricultural products, baby food made from livestock products, milk powder for

baby, and baby food made from aquatic products in Class 5 under the Category of Goods

d) Registration right holder: Plaintiff

14) Prior-used Mark 14

a) Registration number/ Filing date of application/ Date of registration/ Date of renewal registration: Trademark Registration No. 610416/ Sep. 24, 2003/ Mar. 04, 2005/ May 08, 2015



b) Mark at issue: (Color mark)

c) Designated goods: Baby food made from agricultural products (limited to products related to organic farming), baby food made from livestock products (limited to products related to organic farming), and baby food made from aquatic products (limited to products related to organic farming) in Class 5 under the Category of Goods

d) Registration right holder: Plaintiff

**PATENT COURT OF KOREA**  
**FIRST DIVISION**  
**DECISION**

**Case No.** 2020Heo4136 Cancellation of Registration  
(Trademark)

**Plaintiff** A Co., Ltd.  
Representative B  
Counsel for Plaintiff  
Patent Attorney Sanghoon Lee,  
Museok Jeong

**Defendant** C  
Italy  
Representative D  
Counsel for Defendant  
Patent Attorney Myeonggu Kang,  
Yoonwon Park

**Date of Closing Argument** March 02, 2021

**Decision Date** June 17, 2021

**ORDER**

1. The plaintiff's claim is dismissed.
2. The cost arising from this litigation shall be borne by the plaintiff.

**PLAINTIFF'S DEMAND**

The IPTAB Decision 2019Dang1248 decided April 01, 2020

(hereinafter, the “IPTAB Decision”), shall be revoked.

## OPINION

### 1. Established Facts

#### A. The Registered Trademark at Issue

1) Registration Number/ Filing Date of Application/ Registration Decision Date/ Date of Registration/ Renewed Registration Date: Trademark Registration Number 567285/ October 04, 2002/ October 31, 2003/ December 02, 2003/ November 15, 2013

2) Mark at Issue: GREVYI

3) Designated Goods: raincoats, jackets, raincoats for leisure, industrial PVC raincoats, disposable raincoats, industrial safety vests, socks, hats, overalls, work clothing in class 25 under the category of goods

4) Trademark Right Holder: the plaintiff (on December 02, 2003, E Co., Ltd. registered the trademark at issue and completed the transfer of the trademark rights in its entirety to the plaintiff on April 09, 2013)

#### B. Prior-used Mark

1) Mark at Issue: GREVI

2) Used goods: Umbrellas, parasols, bags, wallets, clothing, shoes, hats, belts, etc.

3) User: Defendant

### C. IPTAB Decision

1) The defendant appealed a trial on April 19, 2019, to invalidate the registered trademark at issue against the plaintiff arguing that “the registered trademark at issue falls under Article 7(1)(xi) and 7(1)(xii) of the Old Trademark Act (before being amended by Act No. 7290, December 31, 2004; hereinafter, the same shall apply) in terms of its relationship with the prior-used mark.” The appeal by the plaintiff was reviewed under Case No. 2019Dang1248 by the Intellectual Property Trial and Appeal Board (hereinafter the “IPTAB”).

2) The IPTAB issued a decision affirming the defendant’s appeal for invalidation trial on April 01, 2020, on the ground that “the prior-used mark was remarkably recognized at least by ordinary purchasers in Italy when the application for the subject trademark was filed. Further, the registered mark is identical or similar to the prior-used mark in terms of appearance and name when viewed as a whole. Since the subject registered trademark is a mark for which an application was filed with unfair purposes, such as to gain an undue profit by taking advantage of the reputation of the prior-used mark conspicuously recognized by ordinary purchasers at home and abroad, the subject registered trademark falls under Article 7(1)(xii) of the Old Trademark Act.”

3) In response, the plaintiff filed an appeal with IPTAB on May 22, 2020, against the defendant, seeking to revoke the IPTAB Decision.

**【Factual basis】** Undisputed facts, statements in the plaintiff’s exhibits 1 and 2, the purport of the overall argument

## 2. Plaintiff’s Arguments

① Since the prior-used mark was not remarkably recognized in Italy

as indicating the goods of a specific person, and the applicant never negotiated with the defendant when the application for the registered mark at issue was filed, it may not be deemed that the applicant had an unjust purpose in light of the following: length of use of the prior-used mark by the defendant; whether the defendant registered the prior-used mark when the application for the registered mark at issue was filed; a ratio accounted for by hats out of the sales and advertising costs of the entire products bearing the prior-used mark; the economic scale of Italy when the application for the registered design at issue was filed; a ratio accounted for by the defendant's hat sales out of the hat sales as a whole; and whether the prior-used mark was exposed in a movie, etc., sponsored by the defendant, etc. Since the registered mark at issue does not fall under Article 7(1)(xii) of the Old Trademark Act, the IPTAB decision is inconsistent with the above analysis and shall not be upheld and be revoked.

② In light of the number of imported goods bearing the prior-used mark and the estimated size of the domestic hat market, it may not be deemed that the prior-used mark was remarkably recognized by ordinary purchasers in Korea. Therefore, the registered mark at issue does not fall under Article 7(1)(xi) of the Old Trademark Act.

### **3. Discussion**

#### **A. Relevant Laws**

Article 7(1)(xii) of the Old Trademark Act disallows the registration of a trademark identical or similar to a trademark that is well recognized as indicating the goods of a particular person by consumers within or outside the Republic of Korea, and which is used for unjust purposes such as obtaining undue profits or inflicting harm on the prior trademark holder. The purpose of the provision is to prohibit the registration of a trademark by a third party who imitates a well-known

## PATENT COURT DECISIONS

mark not registered in the territory of Korea, which is readily and remarkably recognized by the consuming public home and abroad to be the mark of a specific person, causing harm to the owner of the well-known mark by obstructing business within Korea or gain undue profit from the use of the counterfeit mark.

In order for the above provision to apply, a mark of a particular person shall be a well-known mark, and a trademark applicant shall use the trademark identical or similar to the well-known mark of a particular person with unjust purposes. Whether a mark of a particular person corresponds to a well-known mark shall be determined in light of the following: period, method, state, scope, etc., of its use; and whether it is widely known in the course of trade or social norms in an objective manner. Whether a trademark applicant has unjust purposes shall be determined considering the following facts: to what extent the mark of a particular person is known, famous, or creative; to what extent the mark of a particular person is identical or similar to the applicant's trademark; whether an applicant negotiates with a particular person and the contents thereof, if any; relation between the parties; whether an applicant prepared for businesses with the registered mark; whether goods are identical, similar, or share an economically relevant relationship; the course of trade, etc. Whether the above provision may apply shall be determined based on when an application for the registered mark was filed (Supreme Court Decision 2020Hu10810, dated January 14, 2021).

### **B. Discussion**

#### 1) To What Extent The Prior-used Mark Is Known

It may be deemed that the prior-used mark of the defendant was remarkably recognized indicating the goods of a particular person among relevant purchasers in Italy in relation to hats around October 04, 2002, at the time when the application for the registered mark at

issue was filed, considering the following facts comprehensively: evidence shown above; statements in the plaintiff's exhibits 4-1 and 4-2, the defendant's exhibits 1, 4, 8, 9, 13, 24, and 26 to 28, the defendant's exhibits 2-1, the defendant's exhibits 5, 7-1, 7-2, and 7-3, the defendant's exhibits 9-1 to 9-4; and the purport of the overall argument.

① The prior-used mark can be traced back to 1875, when F began to produce and sell hats in Signa near Florence in Italy, and the Grevi family had sold hats for four generations. Since 1981, G has used the prior-used mark. As explained above, the Grevi family sold hats for about 127 years before the filing date of the application for the registered mark at issue, and the use period of the prior-used mark was also about 20 years.

② The sales of goods to which the prior-used mark was attached, such as hats, gloves, scarfs, etc., were as follows: ITL 4,524,294,441 (about KRW 2.67974 billion<sup>1)</sup>) in 1999; ITL 4,887,935,579 (about KRW 2.75484 billion<sup>2)</sup>) in 2000; ITL 5,734,618,471 (about KRW 3.40751 billion<sup>3)</sup>) in 2001; and EUR 3,298,554.88 (about KRW 3.8222 billion<sup>4)</sup>) in 2002. Also, the defendant made investments in advertising as follows: ITL 58,464,442 (about KRW 34.63 million) in 1999; ITL 73,631,303 (about KRW 41.5 million) in 2000; ITL 130,213,441 (about KRW 77.37 million) in 2001; and EUR 82,988.56 (about KRW 96.16 million) in 2002. Even if objective materials presenting the ratio of hats bearing the prior-used mark out of the sales of all hats are missing, the amount of sales of hats bearing the prior-used mark is estimated to be substantial in light of the following: the size of Italy's economy at the time when the application for the registered mark at issue was filed; the fact that it seems that the hat sales would account

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1) KRW 59.23/ITL 100 in January 2000

2) KRW 56.36/ITL 100 in December 2000

3) KRW 59.42/ITL 100 in December 2001

4) KRW 1,158.75/EUR in March 2002

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for most of the sales above; and the sales of a particular product, which are hats, in this case, recorded as stated above, etc.

③ The defendant not only exported hats to which the prior-used mark was attached to the countries such as the U.K., France, the U.S., Japan, and Germany in 2000, the U.K., France, the U.S., Japan, Germany, and Greece in 2001, and the U.K., France, the U.S., Japan, Germany, and Taiwan in 2002 but also the allowed domestic companies to import hats bearing prior-used mark at the time of the application filing of the subject mark. To be specific, H Co., Ltd. on March 30, 2000, I Co., Ltd. on April 30, 2001, and J Co., Ltd. on April 27, 2001, June 18, 2001, November 15, 2001, and March 25, 2002, imported the hats, respectively.

④ Prior to the application of the registered mark at issue, the defendant filed an application for the prior-used mark in the E.U., the U.S., and Japan. The defendant filed an application for the prior-used mark on May 31 in the E.U. and registered the mark on July 26, 2001. In Japan, the application was filed on September 14, 2001, and registered on September 14, 2001, and in the U.S., the application was filed on October 17, 2000, and registered on April 15, 2003.

⑤ The defendant made an advertisement in famous fashion magazines by posting pictorials as follows: “K” in October 1998; “K” in October 2000; “L Italia” in October 1998; “L Germany” in January 2001; “M” in January, May, and August 2002; “N” in May 2002; “O France” in July 2002; “P” in September 2002; and “Q” in October 2002. The defendant sponsored movies in the U.S. and Italy by providing leading actors with hats bearing the prior-used mark and featuring the product: *UN TE CON MUSSOLINI* in 1999; *CALLAS FOREVER* in 2002; *PRETTY WOMAN* in 1990, etc.

### 2) Whether The Registered Trademark at Issue Is Similar to The Prior-used Mark

On the basis of the above-established facts, evidence explained

above, and the purport of overall arguments, the registered mark at issue is substantially similar and identical to the prior-used mark in terms of appearance and name, increasing the possibility that ordinary purchasers are misled or confused about the source of goods in the case where the registered mark at issue and the prior-used mark are used on identical or similar goods.

① The registered mark at issue is merely a mark that has added “Y” between “V” and “I” of the prior-used mark, and letters other than “Y” are identical. Also, both marks are letter marks composed of uppercase letters that are bold and dark. Since their overall configuration and dominant impression are substantially similar, the registered mark at issue is very similar to the prior-used mark in terms of appearance.

② It seems that the prior-used mark is read as “Gravy”, and the registered mark at issue is also pronounced “Gravy.” Thus, the pronunciation of the registered mark at issue is identical or similar to that of the prior-used mark.

③ The prior-used mark originated from the name of the representative of the defendant, and the registered mark at issue was artificially coined without a special meaning and thus the conceptions in both marks cannot be compared. (the plaintiff argues that the registered mark at issue is the scientific name of Grevy’s zebra (*Equus grevyi*). However, it could not be acknowledged, as asserted by the plaintiff, that the plaintiff used the registered mark at issue for the designated goods taking a pattern of zebra as a motif. Therefore, the plaintiff’s argument is not accepted.)

### 3) Whether Plaintiff Had Unjust Purposes

In light of the facts established above, the evidence examined above, the statements in defendant’s exhibit 3, the purport of the overall argument, the degree of famousness of the prior-used mark, the history of the application of the registered trademark at issue, and the

## PATENT COURT DECISIONS

application of a mark identical to the prior-used mark other than the registered mark at issue by the defendant, it may be deemed that the applicant for the registered mark at issue filed an application for the subject mark with unjust purposes, such as obtaining undue profits by taking advantage of the high-quality image or attractiveness to customers of the prior-used mark by imitating the prior-used mark, which is remarkably recognized as an indicator of the goods of the defendant among purchasers in Italy, to inflict harm on the defendant, the user of the prior-used mark. Article 5-17 of the Old Trademark Act stipulates that procedures followed relating to trademark rights or rights relating to a trademark shall have an effect on a successor of such trademark rights or rights relating to a trademark. Therefore, it may be deemed that the filing of an application for the registered mark at issue with unjust purposes shall have an effect on the plaintiff to whom the right relating to the registered mark at issue was transferred from the applicant.

① Among the designated goods of the registered trademark at issue, hats are identical or similar to the hats bearing the prior-used mark (even if, as argued by the plaintiff, the hats sold by the plaintiff are not the same type of the hats produced by the defendant, they are at least similar). Among the designated goods of the registered mark at issue, raincoats, raincoats for leisure, industrial PVC raincoats, and disposable raincoats share an economically relevant relationship with the hats bearing the prior-used mark, considering the use, distributor, distribution channel, purchaser, etc.

② The registered mark at issue is identical and very similar to the prior-used mark in terms of name and appearance, raising an assumption that the registered mark at issue is made by imitating the prior-used mark. In fact, it seems that the defendant's application for registration of the mark was rejected on the ground that the prior-used mark is identical or similar to the registered mark at issue.

③ On January 12, 2011, the plaintiff filed an application for “**GREVI**,” having, as its designated goods, belts of Class 25

under the Category of Goods. However, the defendant filed for the opposition. On November 16, 2012, the Korean Intellectual Property Office (KIPO) issued a decision on the objection that the above opposition was well-grounded. Also, on November 02, 2011, the

plaintiff filed an application for “**GREVI**,” etc., having, as their designated goods, umbrellas, parasols, golf umbrellas, etc., of Class 18 under the Category of Goods. Further, on January 31, 2013, the plaintiff registered the same. However, on May 10, 2013, the defendant requested a trial to invalidate the registration against the plaintiff with IPTAB’s Case NO. 2013Dang1218. On December 30, 2014, the IPTAB decided that the registration of the above mark shall be invalidated under Article 7(1)(xii) of the Old Trademark Act. Even if the plaintiff filed legal proceedings against the defendant on February 16, 2015, seeking the revocation of the IPTAB Decision with the Patent Court of Korea under Case 2015Heo1157, the Patent Court of Korea rendered, on May 19, 2016, a decision to dismiss the plaintiff’s action, and the decision became final and conclusive on June 03, 2016.

④ The plaintiff argued that it introduced the prior-used mark as an Italian brand on an online web-site that it operated to advertise and promote its own products and stated that it began producing hats around 1875 and is manufacturing umbrellas and gloves, too. On the basis of the plaintiff’s argument, the plaintiff is selling hats and gloves using the registered mark at issue as well.

### **C. Summary of Discussion**

The registered mark at issue is identical or similar to the prior-used mark, which was remarkably recognized as indicating the goods of a specific person among foreign purchasers when the application of the registered mark at issue was filed. The application was filed for unjust

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purposes, intending to obtain undue profits, etc. Therefore, the registered mark at issue falls under Article 7(1)(xii) of the Old Trademark Act. Accordingly, the registration of the registered mark at issue shall be invalidated under Article 71(1)(i) of the Old Trademark Act without further examination of other invalidation grounds. Thus, the IPTAB decision is consistent with the above analysis and shall be upheld.

### 4. Conclusion

Accordingly, the plaintiff's claim to revoke the IPTAB decision is without merit and is therefore dismissed. It is so decided as ordered.

Presiding Judge	Seungryul SEO
Judge	Seongjin KOO
Judge	Kyung Ock LIM

**PATENT COURT OF KOREA**  
**SECOND DIVISION**  
**DECISION**

**Case No.** 2021Heo2267 Rejection (Trademark)

**Plaintiff** A  
CEO B  
Counsels for Plaintiff  
C  
Patent Attorneys Gyeonghee Lee,  
Jisoo Kim

**Defendant** Commissioner of Korea Intellectual  
Property Office  
Counsel for the Defendant Seungho Ryu

**Date of Closing Argument** June 11, 2021

**Decision Date** July 02, 2021

**ORDER**

1. The IPTAB Decision 2020Won70 dated January 14, 2021 shall be revoked.
2. The litigation cost arising from this litigation shall be borne by the Defendant.

**PLAINTIFF'S DEMAND**

As ordered.

## OPINION

### 1. Background

#### A. Claimed Mark

- 1) Application Number/ Filing date of Application: No. 40-2019-46821/ May 27, 2019
- 2) Mark at Issue: **KALOOM**
- 3) Designated Goods: Computer software for networking of data centers under Class 9 of the Korean Classification of Goods, computer software consultancy, installation, maintenance and update on computer software under Class 42 of the Korean Classification of Goods.

#### B. Prior-registered Mark

- 1) Registration Number/ Filing Date of Application/ Date of Registration: No. 1233581/ May 19, 2016/ February 15, 2017



- 2) Mark: 카툼
- 3) Designated Goods: Downloadable smartphone application (software), downloadable computer software application, Downloadable computer program, computer software for data processing, computer software for document management, smartphone application software, operating system programs, computer software, computer firmware under Class 9 of the Korean Classification Goods.

### C. Prior-registered Service Mark

- 1) Registration Number/ Filing date of Application/ Date of Registration: No. 395207/ May 19, 2016/ April 21, 2017.



- 2) Mark: 카룸

- 3) Designated goods: Comprehensive shopping mall by Internet, business intermediary services relating to mail order by telecommunications, advertising, promotional services, price comparison services, arranging of contractual (trade) services with third parties, commercial mediation, provision of product sales information and commercial information, provision of information concerning commercial sales, price assessment services of goods, provision of information concerning goods, database management, data search in internet, import-export agency services, wholesale store services featuring cars, retail store services featuring cars, wholesale store services featuring parts and accessories for automobiles, retail store services featuring parts and accessories for automobiles under Class 35 of the Korean Classification of Services.

### D. Procedural History

- 1) On March 27, 2019, the plaintiff filed an application for the claimed mark. On July 09, 2019, the patent examiner of the Korea Intellectual Property Office(hereinafter, the “KIPO”) sent a Notice of Grounds for Rejection to the plaintiff regarding the subject mark, stating that “since the claimed mark is identical or similar to the prior-registered mark and the prior-registered service mark (hereinafter, the “prior-registered mark” together) in mark and designated goods,

## PATENT COURT DECISIONS

thereby falling under Article 34(1)(vii) of the Trademark Act.”

2) On October 10, 2019, the plaintiff submitted a written opinion in response to the said reason for rejection. However, the KIPO examiner issued a rejection decision on December 10, 2019, stating that “although the claimed mark and the prior-registered mark are not similar in either appearance or conception, they are similar in terms of sound, mark, and designated goods thereof, thereby falling under Article 34(1)(vii) of the Trademark Act.”

3) On January 09, 2020, the plaintiff requested a trial with the Intellectual Property Trial and Appeal Board (hereinafter, the “IPTAB”) seeking revocation of the rejection decision as Case No. 2020Won70, but the IPTAB, on January 14, 2021, rendered a decision, dismissing the plaintiff’s claim, stating the said grounds for rejection.

**【Factual basis】** Undisputed facts, statements, and videos in Plaintiff’s Exhibits 1 through 4 (including exhibits with branching numbers), the purport of the overall argument

## 2. Parties’ Arguments

### A. Plaintiff

The claimed mark is not similar to the prior-registered mark in appearance, sound, and conception, having different designated goods. In relation to the prior-registered mark, the mark at issue does not fall under Article 34(1)(vii) of the Trademark Act.

### B. Defendant

The essential part of the prior-registered mark at issue is a letter

part “ 카룸 ”, which is phonetically similar to the claimed mark and therefore, the two marks are similar overall. Moreover, the claimed mark has similar designated goods compared to the prior-registered mark, thereby falling under Article 34(1)(vii) of the Trademark Act.

### **3. Whether the IPTAB Erred**

#### **A. Relevant Law**

Determination of the similarity between trademarks is to be based on whether there are concerns for ordinary consumers or traders to misperceive or confuse the source of goods from the perspective of their intuitive perception of the trademark, grounded in an objective, overall observation of the appearance, name, and meaning of the trademark by recollection.

If the two marks are unlikely to mislead or confuse general consumers or traders as to the source of goods on the basis of what they intuitively recognize through an overall observation, the two shall not be deemed as similar marks, even though they are similar in one of the three elements—the appearance, sound, meaning—and thus, they are highly likely to cause confusion or mislead ordinary consumers or traders and shall be deemed as similar marks. (Supreme Court Decision, 2019Hu11121, decided April 29, 2020, Supreme Court Decision, 2020Hu10957, decided December 30, 2020). Meanwhile, whether a composite trademark consisting of two or more letters or figures is similar shall be, in principle, determined based on the appearance, sound, and meaning of the entirety of the elements thereof. However, where a mark has an essential part, which serves as a source identifier for itself and others by leaving an impression, memory, and association regarding the trademark to the general consumers, the similarity of trademarks shall be determined through

## PATENT COURT DECISIONS

comparison and observation with the essential part to exercise due observation in entirety. (Supreme Court Decision, 2015Hu1690 decided February 09, 2017). Whether an element of a mark is an essential part shall be decided comprehensively based on the following: whether the element is well-known or famous or gives a strong impression to ordinary consumers, or whether the element accounts for most of the mark as a whole in addition to a degree of relative distinctiveness compared to other elements and a degree of combination therewith; relation with the designated goods; the custom of trade, etc. (Supreme Court Decision, 2015Hu1690, decided February 09, 2017).

Further, in determining whether the similarity of marks is likely to mislead or confuse the purchasers as to the source of goods, the course of trade shall be considered in relation to the designated goods concerned as well. In this respect, where it is common to advertise or order designated goods through voice media, such as telephone, etc., the sound was evaluated as being more important than appearance or meaning (Supreme Court Decision 96Hu344, decided September 06, 1996, Supreme Court Decision 97Hu3050, decided February 25, 2000). Due to the widespread of the internet, and a rapidly increasing number of advertisements, sales, and orders through audiovisual media, such as a smartphone, tablet PC, laptop, etc., ordinary consumers and traders tend to perceive and remember a mark of goods as a “visual image” itself. In particular, most computer software, applications, etc., which are designated goods of the prior-registered mark at issue, are traded and advertised through a display screen, etc. of electronic devices. Thus, it would be reasonable to evaluate the similarity of appearance as being as important as the similarity of the names in determining whether it is likely to cause misconception or confusion of the prior-registered mark at issue with the claimed mark.

Meanwhile, in case of the registration of a mark is determined by an appeal against rejection, whether a claimed trademark falls under Article 34(1)(vii) of the Trademark Act shall be determined based on the time when the IPTAB renders its decision (Article 34(2) of the

Trademark Act).

### B. Determining the Similarity of Marks by Comparing Essential Parts

In light of statements and images in the plaintiff's exhibits 1 through 4 and 6 and the purport of the overall argument, the figures and letters are very closely combined and frequently used together in the prior-registered mark. Thus, it may be deemed that the two as a whole create an impression such that ordinary consumers would remember or associate the mark. Therefore, when determining the similarity of the prior-registered mark and the subject mark shall be based on an entire mark



The prior-registered mark “ 카룸 ” has a figure “  ” at the top and a letter “ 카룸 ” at the bottom. The figure embodies a hat and eyes of a human with a body and wheels of a car and places the same on the upper part. Also, the figure expresses a mouth of a human on the lower part and thus embodies a human face as a whole. It seems that this distinctive shape somewhat contributes to forming an impression of the mark. However, it seems that this shape is not yet well-known or famous in the marketplace of designated goods.

In the prior-registered mark, the “Kaloomb” portion is combined with the figure by being written clearly in Gothic font below the figure. Moreover, the prior-registered mark is not clear only with the figure shown above as to what the figure means, and the letter “Kaloomb” is only a coined word and thus it does not deliver its meaning in itself. The prior-registered mark could clearly deliver the distinctiveness of the mark, only when the figure and the letter are combined, to the consumers, who see the mark “Kaloomb”, as being perceived as “car” and “room”, which are familiar English words. In other words, the figure is very closely combined with the text in the prior-registered

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mark.

In the case of computer software, applications, etc., which are the designated goods of the subject prior-registered mark, the said mark is likely to be frequently perceived by consumers as a “visual image” itself in which the letter portion is combined with the figure through a display of an electronic device.

In an actual marketplace of the designated goods of the subject prior-registered mark, the word “Kaloom” and the figure “” are used separately in some advertisements, internet bulletin boards, etc. However, the figure is frequently used in the combination of the letter in the following cases: an icon in the figure is used together with the letter in smartphone applications; the figure is used together with the letter even in an address bar, tab, etc. of the “Kaloom” website; and, in NAVER blogs, the figure of the prior-registered mark is used as a profile picture and its name is marked as “carroom”. (In an actual use pattern stated above, the word is placed on the right side of the figure or in a somewhat distant place. However, it seems that such a parallel use itself shows that the prior-registered mark could not become distinctive only with the letter or figure.)

### **C. Whether the Claimed Mark Is Similar to the Prior-Registered Mark**

In light of statements and images in the plaintiff’s exhibits 9 through 14 and 18 and the purport of the overall argument, it may not be deemed that even if the claimed mark is somewhat similar to the prior-registered mark in terms of the name, it is markedly different in terms of appearance and conception, and thus it is not likely to cause ordinary consumers or traders to experience intuitive misconception or confusion as to a source of goods in trading the designated goods, even though it is used together with the prior-registered mark. Therefore, the claimed mark cannot be deemed to approximate the

prior-registered mark.

1) In determining whether marks are similar to each other, the sound of a mark in foreign languages shall, in principle, be as pronounced naturally without difficulty by most traders or consumers in Korea. If the use of the mark is recognized, such as specific writing of the foreign mark in Korean by traders or consumers in Korea, etc., the sound of such foreign mark shall be determined in light of such use of the mark (Supreme Court Decision 2004Hu2093, decided November 10, 2005).

2) It would be natural for the claimed mark to be pronounced as “Kaloom” in light of the following facts: it would be natural for “L” between vowels to be pronounced as a final consonant “L” of the preceding syllable in light of English education in Korea; where “L” in the middle of a word is before a vowel, it shall be written as “LL” according to the Loanword Orthography; of 95 marks beginning with “kal” whose applications have been filed since 2010 but until January 14, 2021, on which the IPTAB Decision was rendered, 83 marks were transliterated as “kal” and only 8 marks were transliterated as “ka”; and five media reports from June 08, 2018 to November 10, 2020, disclosed the plaintiff company as “kalloom” and introduced the same to ordinary consumers. In contrast, it seems that the prior-registered mark will be called “Kaloom” as its text. If so, it may be deemed that the sound of both marks is short with 2 syllables, and the overall sound is different, as the first syllable has different final consonant letters, i.e., “kal” and “ka.” Hence, even if the claimed mar were somewhat similar to the prior-registered mark in terms of the sound, it may not be determined that their pronunciations are identical or similar.

3) As examined above, it is reasonable for the comparison of appearance to be an important criterion for determining the similarity of the subject mark. The claimed mark is composed of simple English letters. However, the prior-registered mark is composed of the figure

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and the text as shown above. Thus, they are remarkably different in terms of appearance, due to the existence of the figure, the difference between the Korean letters and English letters, etc.

4) The subject mark is a coined trademark, and no meaning is associated therewith. However, in the prior-registered mark, in which the car shape is closely combined with “Kaloom,” it seems that the consumers or traders of computer software, etc. with the prior-registered mark would perceive that “Kaloom” expresses the sound of (transliterates as) “car room” and conceive the mark as “space for car”, etc. Accordingly, the claimed mark is not similar to the prior-registered mark in meaning.

### **D. Summary of Discussion**

Accordingly, it may not be deemed that the claimed mark is similar to the prior-registered mark. Thus, the claimed mark does not fall under Article 34(1)(vii) of the Trademark Act in its relation to the prior-registered mark without further examination of the similarity of designated goods.

### **4. Conclusion**

Then, the IPTAB decision is inconsistent with the above analysis and shall not be upheld. the plaintiff’s claim to revoke the IPTAB decision is therefore well grounded and shall be granted. Judgment as ordered.

Presiding Judge	Sangwoo KIM
Judge	Hyejin LEE
Judge	Young Gi KIM

**PATENT COURT OF KOREA**  
**FOURTH DIVISION**  
**DECISION**

**Case No.** 2021Heo2458 Rejection (Trademark)

**Plaintiff** A  
Japan  
Representative B  
Counsel for Plaintiff  
Patent Attorney Mijeong Lee  
Subcounsel for Plaintiff  
Patent Attorney Hyeonmi Kim

**Defendant** Commissioner of Korean Intellectual  
Property Office  
Counsel for the Defendant  
Jaeseong Noh

**Date of Closing Argument** July 23, 2021

**Decision Date** August 20, 2021

**ORDER**

1. The plaintiff's claim is dismissed.
2. The cost arising from this litigation shall be borne by the plaintiff.

**PLAINTIFF'S DEMAND**

The IPTAB Decision 2020Won746, dated February 23, 2021, is revoked.

## OPINION

### 1. Basic Facts

#### A. Plaintiff's Claimed Mark at Issue

1) Application Number/ Filing Date of Application: No. 40-2019-48 755/ March 29, 2019

2) Mark at Issue: **ARGAN RICH**

3) Designated Goods: As stated in the appendix

#### B. Rejection and Procedural History

1) As to an application for registration of the trademark at issue, an examiner of the Korean Intellectual Property Office (hereinafter the "KIPO") sent a Notice of Grounds for Rejection to the plaintiff on October 11, 2019, stating the following grounds for rejection: "① the trademark at issue is recognized as having the meaning of "Argan is rich" when used in relation to the designated good, such as cosmetics, etc., and thus falls under Article 33(1)(iii) of the Trademark Act as the mark that instinctively reveals the nature (raw materials, effect, etc.) of designated goods; and ② some of the names of designated goods are inaccurate or the categories of goods are stated incorrectly."

2) The plaintiff, on December 12, 2019, amended some of the names of designated goods and submitted a written argument, stating that the entire phrase "ARGAN RICH" is likely to be interpreted in various ways and the phrase does not instinctively endow a specific meaning of "Argan is rich"; and even if the phrase makes the consumers instinctively believe that "Argan is rich," the subject trademark does not make the consumers instinctively recognize the nature of the goods with the marks, because the argan tree itself is not used as a raw material for cosmetics.

3) The KIPO examiner, on February 12, 2020, issued a decision to reject the registration of the trademark stating that the grounds in the Notice of Grounds for Rejection were still not resolved in the written argument submitted by the plaintiff (hereinafter, the “Rejection Decision”).

4) On March 12, 2020, the plaintiff filed an appeal regarding the rejection, contending that the subject trademark does not fall under Article 33(1)(iii) of the Trademark Act. The Intellectual Property Trial and Appeal Board (hereinafter the “IPTAB”) reviewed the above appeal by the plaintiff under Case No. 2020Won1802 and issued an administrative decision to dismiss the plaintiff’s appeal on February 23, 2021.

**[Factual basis]** Undisputed facts, statements, and images in plaintiff’s exhibits 1 through 5 and defendant’s exhibits 6 and 7, the purport of the overall argument

## **2. Whether the IPTAB Erred**

### **A. Summary of Plaintiff’s Argument for Revocation of IPTAB Decision**

The subject trademark does not fall under Article 33(1)(iii) of the Trademark Act on the grounds stated below. Thus, the IPTAB decision premised otherwise shall not be upheld and be revoked.

The subject trademark (**ARGAN RICH**) contains the term “ARGAN,” which simply means “argan fruit,” not “argan oil” itself. Further, the term “ARGAN RICH” could be translated in many different ways, such as “many types of argan fruit,” etc. If the term “ARGAN RICH” is typed in the search bar on the internet, what appears is the product that uses the subject trademark. Other products that use Argan oil can be found only when the phrase “ARGAN OIL”

## PATENT COURT DECISIONS

is typed in. Therefore, even if it may be deemed that the subject trademark implies or stresses properties, raw materials, etc., of the designated goods, it does not cause the same to be known intuitively notwithstanding its distinctiveness.

### **B. Whether the Trademark at Issue Falls under Article 33(1)(iii) of the Trademark Act**

#### 1) Relevant Law

Article 33(1)(iii) of the Trademark Act provides that the registration may not be obtained for a trademark consisting solely of a mark indicating, in a common manner, the place of production, quality, effect, usage, etc., of the goods, on the following grounds: since everyone needs and wants to use such descriptive mark as required while distributing commercial goods, the mark shall not be used by a particular person in a monopolistic and exclusive way under the public interest; and if a specific person is permitted to use such mark in a monopolistic and exclusive way, it would be difficult to discern the same in the relation with others' goods of the same kind. In light of this, when determining which trademark falls under the above criteria shall be based objectively on the conception of the trademark, relation with the designated goods, degree of understanding and perception of the trademark by ordinary consumers or traders, actual trading practices, etc. (Supreme Court Decision 2005Hu2595, decided January 26, 2006, Supreme Court Decision 2005Hu2786, decided July 28, 2006, Supreme Court Decision 2015Hu1911, decided January 14, 2016).

#### 2) Established Facts

a) "ARGAN" is a fruit of an argan tree with thorns and is cultivated mainly in the Southern part of country D. "Argan oil" extracted manually from argan fruit has a musk scent and is used mainly as food or for beauty (Plaintiff's Exhibit 5; hereinafter, the

fruit above and oil extracted therefrom are referred to as “Argan fruit” and “Argan oil,” respectively). Consumers in Korea consume “Argan oil” extracted from Argan fruit as cooking oil or cosmetics rather than consuming argan trees or fruits directly.

The term “RICH” is an English word that has the following meanings: (a country or person is) wealthy, with means, a wealthy person; (food is/has) fatty, lots of milk fat; (soil is) fertile; (color, sound, scent, or taste is/has) dark, flavor, deep; dazzling, luxury, etc. (Plaintiff’s Exhibit 6).

b) If “Argan” is entered into a search bar of “C,” an internet search portal in Korea, the following terms are presented as related keywords: “Argan oil”; “effect of Argan oil”; “Argan oil for hair”; “Argan treatment”; “Argan shampoo”; “effect of edible Argan oil”; “D Argan oil”; “E rose Argan”; “Arginine”; and “F Argan oil.” In the “power link” at the top of the search results, the following links are shown: “a consumer report on comparison of Argan oil products”; “Argan G”; “H edible Argan oil”; “French Argan oil I made of 100% organic Argan materials”; “J collagen Argan oil”; and “choose Argan oil fcv” (Defendant’s Exhibit 1).

c) When searching “Argan” in “C,” a search portal site, covered in news articles, the following stories deal with “Argan oil” up to the date of the IPTAB Decision: “the first release of ‘K Argan oil’ containing 100% Argan oil” (*Money Today* dated February 08, 2021); “lease of ‘L Argan oil’ by L Pharmaceuticals” (M, N, O, P and Q dated November 03, 2020); “Answer for an money-making quiz of “golden Argan kernel oil” R” (S and Q dated September 24, 2020); and “How to select edible Argan oil which decreases cholesterol” (T dated September 29, 2020). The related keywords, such as “Argan oil,” “hair essence,” and “recommendation for hair oil,” are displayed at the bottom thereof (Plaintiff’s Exhibit 7).

d) If blog posts on “Argan” are searched in “C,” a search portal site, the following posts are found on “Argan oil” up to the date

## PATENT COURT DECISIONS

of the IPTAB Decision: “No stickiness with hair essence U Argan oil!” (dated February 06, 2021); “As expected before ingesting edible Argan oil” (dated January 22, 2021); “Light and smooth U Argan oil recommended as hair essence” (dated February 07, 2021); “Information known only to those who ingested edible Argan oil (a comment after using the item for one month)” (dated January 14, 2021); “How to select edible Argan oil!” (dated January 12, 2021); “Various ways to use Argan oil for the body” (dated November 28, 2020); “Let’s check the content of Argan oil and ingest the same” (dated January 11, 2021); “Honest comments on the use of Argan oil recommended as hair essence!” (dated January 08, 2021); “I lowered a cholesterol level with edible Argan oil” (dated February 14, 2021); “Let’s closely examine the effect of edible Argan oil” (dated December 06, 2020); “How not to be fooled as to the effect of edible Argan oil” (dated December 12, 2020); “Select edible Argan oil carefully!” (dated November 07, 2020); and “I chose hair essence, argan oil and V hair essence” (dated December 04, 2020) (Plaintiff’s Exhibit 8).

e) If blog posts on “Argan rich” are searched in “C,” a search portal site, multiple posts on the following products are found up to the date of the IPTAB Decision: not only “W Argan rich oil” which is the plaintiff’s product; but also third parties’ products, such as “X intensive rich oil Argan kernel oil,” “Y rich Argan hair essence,” “Z Argan oil-rich hand cream,” “AA hair Argan oil rich type,” etc.

f) If “ARGAN RICH” is searched for in “C shopping”, an internet shopping portal site, “AB,” “AC,” “AD,” “AE,” “AF,” “AG,” “W,” “AH,” and “AI” is displayed at the top as similar brands. Also, a total of 235 items, including “AJ Rich Treatment without Silicone for Dry Hair with Argan and...,” “AD Pure Luxury Argan Color Protect Color Protect Mask 6.75oz/973790,” etc., were searched.

When “ARGAN RICH” or “Argan rich” are browsed on the same shopping mall web-site, a total of 679 items, as illustrated in the pictures below, are searched including “W Argan air treatment rich oil

60ml” produced and sold by the plaintiff (61 sellers), and “AK Y rich Argan hair essence oil for damaged hair 100ml” (5 sellers), “AL Argan rich cream 70ml” (1 seller), “AM Argan oil-rich cream 50ml” (8 sellers), etc., produced and sold by third parties. Also, 4 items whose prices could be compared appealed on the search result page (Defendant’s Exhibit 3).

	<p><b>두서도열 아르간 헤어 트리트먼트 리치 오일 60ml</b>  <b>최저 8,010원</b> 판매자 62                  화장품&gt;미용 &gt; 헤어케어 &gt; 헤어에센스                  헤어타입 : 모든 모발용   용량 : 60ml(g)   세부제품특징 : 윤기부여                  리뷰 ★★★★★ 48 · 등록일 2017.09. · ❤️ 평하기 8 · 📄 정보 수정요청</p>
<p>· 1개 8,010원   45개                  · 3개 25,280원   7개</p>	<p>· 2개 17,820원   10개</p>
	<p><b>부케가르니 나드 리치 아르간 헤어 에센스 오일 손상 모발용 100ml</b>  <b>최저 7,900원</b> 판매자 5                  화장품&gt;미용 &gt; 헤어케어 &gt; 헤어에센스                  헤어타입 : 손상 모발용   형태 : 펌프형   용량 : 100ml(g)   주요제품특징 : 머릿결개선, 흡수력                    세부제품특징 : 윤기부여, 영양공급                  리뷰 ★★★★★ 188 · 등록일 2020.08. · ❤️ 평하기 4 · 📄 정보 수정요청</p>
	<p><b>지고트 아르간 리치 크림 70ml</b>  <b>최저 17,300원</b> 판매자 1                  화장품&gt;미용 &gt; 슂킨케어 &gt; 크림                  주요제품특징 : 촉촉함(수분공급)   세부제품특징 : 흡수력, 보습, 화이트닝, 주름케어                    피부타입 : 모든피부용   용량 : 70ml(g)   사용부위 : 페이스용, 넥                  등록일 2020.06. · ❤️ 평하기 0 · 📄 정보 수정요청</p>
	<p><b>뽕규리어 아르간 오일 리치 크림 50ml</b>  <b>최저 10,900원</b> 판매자 0                  화장품&gt;미용 &gt; 슂킨케어 &gt; 크림                  주요제품특징 : 촉촉함(수분공급)   세부제품특징 : 보습, 모공케어, 영양공급, 주름케어                    피부타입 : 모든피부용   형태 : 펌프형   용량 : 50ml(g)   사용부위 : 페이스용</p>

g) If “argan rich” is typed into the search engine “AN,” the following results come up: “W Argan hair treatment”, etc., produced and sold by the plaintiff; and “AO Argan Oil rich Cream”, “AD Pure Luxury Rejuvenating Argan Oil Elixir,” “Argan Oil Rich Cream,” “AP PHYTORELAX OLIO DI ARGAN RICH,” etc., as illustrated by the pictures on the right and produced by third parties (Plaintiff’s Exhibit 9).

<p>RICH REJUVENATING ... richhaircare.com · 재고 있음</p>	<p>Jigott Argan Oil rich Cream 7... shopme365.com</p>
<p>Argan Oil Rich Cream   Firr thankyoufarmer.my · 재고 있음</p>	<p>HARBOR PHYTORELAX OLIO DI ARGAN RICH B... profumeriaetolite</p>

## PATENT COURT DECISIONS

typed into the same search engine, argan oil and hair cosmetics, makeup cosmetics, etc., with the same as raw materials, produced and sold by various parties, including the plaintiff (Plaintiff's Exhibit 10).

**【Factual basis】** Undisputed facts, statements, and images in the plaintiff's exhibits 5 through 11 and the defendant's exhibits 1 and 3, and the purport of the overall argument

### 3) Discussion

In light of the facts established above and the English proficiency of ordinary consumers in Korea, the subject trademark is likely to make ordinary consumers or traders intuitively sense the quality, effect, use, etc., of the designated goods, such as products "containing rich Argan oil," when applied to the designated goods, such as hair cosmetics, essence oil, makeup cosmetics, etc. Therefore, it shall not be allowed for a specific person to use this mark in an exclusive way for public interests, and this mark is not distinctive in relation to other's products of the same kind.

a) The subject trademark "**ARGAN RICH**" is a mark combining the English words, "ARGAN" and "RICH," with a space between them.

b) Until the date of the IPTAB Decision, many news articles, blog posts, etc., were posted in Korea suggesting that "Argan oil" or cosmetics, cooking oil, etc., containing the same could be effective in beauty, health, etc. Consumers and traders in Korea do not consume and trade argan trees or argan fruit but argan oil. Therefore, most consumers and traders in Korea recognize "ARGAN" in the subject trademark as "Argan oil," which is a raw material for hair cosmetics, essence oil, makeup cosmetics, etc.

c) The English word "RICH" has various meanings. However, where "RICH" modifies "(Argan) oil," it is construed to indicate

containing much argan oil, such as “containing a lot of oil,” “(scent, flavor) fragrant, affluent,” etc.

d) In addition to the plaintiff, many cosmetics manufacturers and sellers produce and sell goods, such as hair cosmetics, essence oil, makeup cosmetics, etc. with product names including “argan,” “rich,” “AK,” “AL,” “AM,” etc. These goods, blog posts thereon, etc., could be easily searched on a search portal, internet shopping malls, etc., in Korea. Even the plaintiff sold goods with “ARGAN RICH” of the subject trademark or a mark “W Argan hair treatment rich oil,” which combines not only “argan rich,” a Korean transliteration, but also “W,” which indicates a separate source.

#### 4) Discussion on The Plaintiff’s Arguments

##### a) Plaintiff’s Arguments

① According to the examination by an KIPO examiner, marks that include the text “ARGAN” or “RICH” and whose designated goods are similar to those of the subject trademark have been registered in Korea, and ② marks, such as “ARGAN RICH,” “<sup>ARGAN RICH</sup>○|L,” etc., which include “ARGAN RICH” of the subject trademark, have been registered in Japan and Malaysia. Hence, the distinctiveness of the subject mark shall also be acknowledged.

##### b) Discussion

(1) In light of the statements and images in the plaintiff’s exhibits 12 through 21, the following facts shall be acknowledged: ① the 8 marks in the following table were applied for and registered for the designated goods, such as cosmetics, etc., in Class 3 under the category of goods; and ② the plaintiff registered “ARGAN RICH” mark with No. 5721212 in Japan and “<sup>ARGAN RICH</sup>○|L” mark with TM2019012456 in Malaysia.

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No.	Registration Number (Established Basis)	Mark	Filing Date of Application/ Registration Date	Designated Goods	Right Holder
1	No. 1062474 (Plaintiff's Exhibit No. 12)	ARGAN INFLUX	2013. 11. 22./ 2014. 10. 6.	Cosmetics, etc., in Class 3	AQ Co., Ltd.
2	No. 1109156 (Plaintiff's Exhibit No. 13)	ARGAN KING	2014. 9. 23./ 2015. 5. 19.	Cosmetics, etc., in Class 3	AR Co., Ltd.
3	No. 874420 (Plaintiff's Exhibit No. 14)	Argan Story	2010. 6. 7./ 2011. 7. 1.	Cosmetic oil, etc., in Class 3	AS Co., Ltd.
4	No. 1146997 (Plaintiff's Exhibit No. 15 <sup>3</sup> )	MIRACLE ARGAN	2015. 4. 8./ 2015. 12. 4.	Cosmetics, etc., in Class 3	AT Co., Ltd.
5	No. 959674 (Plaintiff's Exhibit No. 16)	VITARICH	2012. 3. 27./ 2013. 1. 31.	Cosmetics, etc., in Class 3	AU Co., Ltd.
6	No. 508862 (Plaintiff's Exhibit No. 17)	StyleRich	2000. 6. 15./ 2001. 12. 17.	Baby oil, etc., in Class 3	AV Co., Ltd.
7	No. 608214 (Plaintiff's Exhibit No. 18)	RICH CURLING	2003. 8. 13./ 2005. 2. 11.	Hair conditioner, etc., in Class 3	AU Co., Ltd.
8	No. 817831 (Plaintiff's Exhibit No. 19)	RICH VOLUME	2009. 1. 19./ 2010. 3. 23.	Hair conditioner, etc., in Class 3	AU Co., Ltd.

(2) First, as to the 8 trademarks registered in Korea, whether a trademark is eligible for registration shall be determined individually in relation to its designated goods. Thus, even if a similar mark is already registered, a mark at issue shall not necessarily be allowed to register only for such reason (Supreme Court Decision 99Hu529, decided July 09, 1999).

Each registered mark in the table above is a mark that contains either “ARGAN” or “RICH.” Therefore, the subject trademark would not be acknowledged for its distinctiveness and allowed to be registered only with the fact that the above marks were registered.

(3) In light of other foreign-registered marks, whether the mark at issue can be registered shall be determined independently in relation to its designated goods under the Trademark Act of Korea and shall not be limited by other countries’ registered marks, which have

different linguistic habits (Supreme Court Decision 2002Hu1768, decided May 16, 2003, Supreme Court Decision 2011Hu958, decided December 13, 2012). Further, according to statements in the defendant's exhibit 5, it could be acknowledged that, on June 28, 2017, an application for the letter mark "RICHELSE D'ARGAN," whose elements are similar to those of the subject mark, was filed in France under No. 4372211 but rejected.

(4) The plaintiff's above arguments cannot be accepted in every respect.

### **C. Summary of Discussion**

When the above findings are reviewed comprehensively, the subject trademark falls under Article 33(1)(iii) of the Trademark Act and thus cannot be registered since it is a trademark consisting solely of a mark indicating, in a common manner, the common nature of the goods, for example, raw materials, quality, effect, etc., of the designated goods. Therefore, the IPTAB decision dismissing the plaintiff's claim for trial on the same grounds shall be upheld.

### **3. Conclusion**

The plaintiff's claim to revoke the IPTAB decision is without merit and is therefore dismissed.

Presiding Judge	Taeksoo JUNG
Judge	Juhyoung MUN
Judge	Soonmin KWON

[Annex]

### **Designated Goods of the Trademark at Issue**

Hair bleaches, hair colorants, hair dyes, hair care preparations, hair styling preparations, hair wax, hair setting gels, hair mist, pomade for cosmetic purposes, hair pomades, hair lotions, hair tonics, hair creams, oils for hair conditioning, hair spray, hair shampoos, hair rinses, hair conditioner, perfumes, aromatics (essential oils) for household purpose, fragrances for domestic use, fragrances for personal use, scented room sprays, eau de cologne, essential oils, tissues impregnated with fragrance, talcum powder for toilet use, cosmetics, deodorants for personal use, cosmetic preparations for skin care, skin whitening creams, skin moisturizer, face wash foams, skin lotions, skin milks, skin creams, make-up preparations, lipstick and lip color preparations, mascara, eyebrow cosmetics, eyeliner, make-up powder, cheek colors, eye shadows, beauty masks, make-up removing preparations, cleansing lotions for toilet purposes, cleansing milk for toilet purposes, facial cleanser for toilet purposes, nail polish, nail care preparations, nail polish removers, false nails, tissues impregnated with cosmetic lotions, paper sheet impregnated with deodorant skin lotions and body powder (non-medicated), depilatory preparations, soaps, soaps for personal use, dentifrices, bath liquid (non-medicated), bath gel (non-medicated), bath powder (non-medicated), bath salt (non-medicated), bath tablet (non-medicated), cologne water, roll-on deodorants for personal use, foot deodorant spray, deodorant soaps, antiperspirant soap, soap for foot perspiration, after-shave preparations, shaving preparations, paper sheet impregnated with facial cleanser for toilet purposes, absorbent facial tissues, lip creams, shower gels, antiperspirants (toiletries), soaps (not for medical use), pore packs (cosmetics), hair water (cosmetics), hair foam (cosmetics), hair fixer (hair styling gel) in Class 3 under the category of goods.

**PATENT COURT OF KOREA**  
**TWENTY-THIRD DIVISION**  
**DECISION**

**Case No.** 2020Na1346 Injunction against of Design  
Right Infringement, etc.

**Plaintiff-Appellant** 1. A  
2. B Co., Ltd.  
Representative A  
Counsel for Plaintiffs  
Lawyer Seoryeong Choi

**Defendant-Appellee** 1. C LLC  
Representative D  
2. D  
Counsel for Defendants  
Lawyer Changsoo Park

**District Court's Decision** Busan District Court, 2019Gahap46882,  
dated April 1, 2020

**Date of Closing Argument** October 21, 2020

**Decision Date** November 27, 2020

**ORDER**

1. The plaintiffs' appeal is dismissed in its entirety.
2. The litigation cost arising from this appeal shall be borne by the plaintiffs.

## APPELLANT'S DEMAND

The lower court's decision is revoked. The defendants shall not manufacture, sell, import, export, or use laver cultivation nets as illustrated in pictures published in [Appendix 1]. The defendants shall discard laver cultivation nets as illustrated in pictures published in [Appendix 1] and stored in their plants, offices, warehouses, and other places and shall jointly pay to the plaintiffs the following: KRW 49,470,425; and an amount calculated at an annual rate of 12% for a period from the date on which a duplicate of the complaint is served to the day when the same is fully repaid.

## OPINION

### 1. Basic Facts

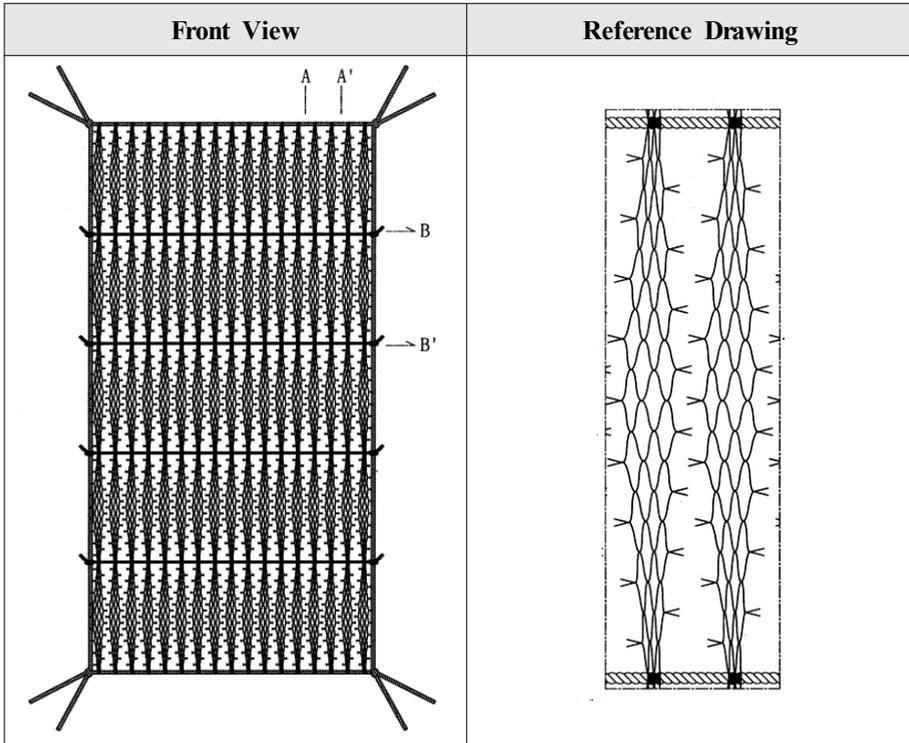
#### A. Plaintiffs' Status and the Registered Design Right at Issue

The plaintiff A is a holder of the registered design shown below (hereinafter, the "registered design at issue"). On July 27, 2001, the plaintiff B Co., Ltd. (hereinafter, the "plaintiff company") was established for wholesale and retail sales of fishing gear, etc., and received from the plaintiff A a registration of exclusive license of the subject registered design for a period from February 11, 2010, to February 10, 2013 (Plaintiffs' Exhibit 2). Also, the plaintiff company was granted a sole license for the period from August 21, 2015, to March 18, 2024 (Plaintiffs' Exhibit 20).

1) Registration Number/ Filing Date of Application/ Registration Date: No. 524106/ November 04, 2008/ March 18, 2009

2) The Subject Article of Design: Laver Cultivation Net

3) Description, Summary, and Drawings of the Design: As stated in [Appendix 2], other than the drawings shown below (the front view, the reference drawing).

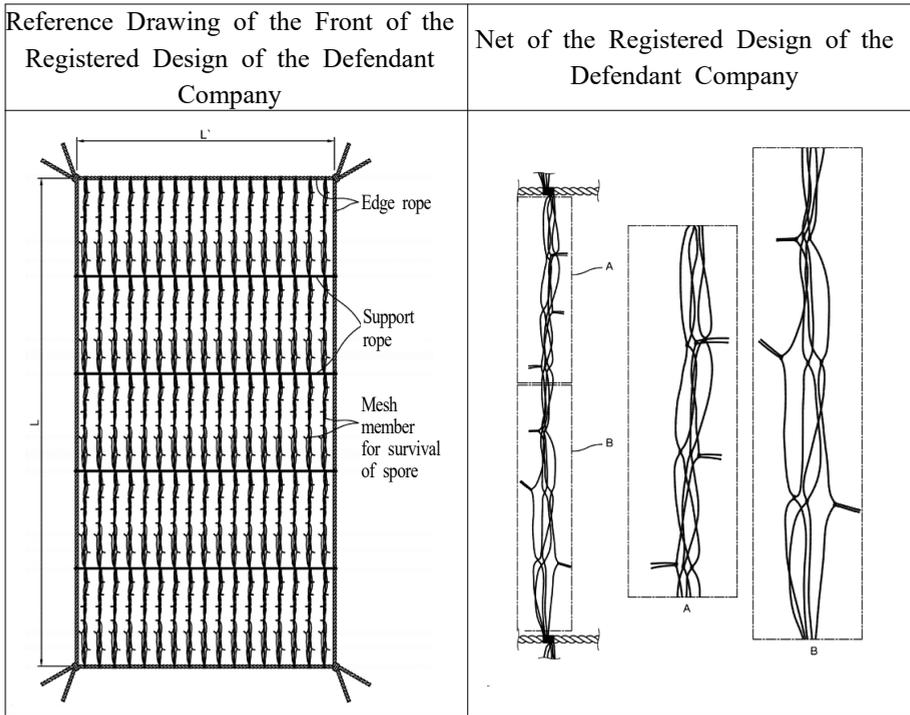


### B. Defendants’ Status and Registered Design of the Defendant Company

1) On April 29, 2015, the defendant C LLC. (hereinafter, the “defendant company”) was established for the manufacturing, sales, distribution, etc., of laver nets. On or after November 25, 2015, the defendant D had been CEO of the defendant company.

2) On May 03, 2019, the defendant company also completed the registration of design for laver cultivation nets separately under Registration No. 30-1005748 (Defendants’ Exhibit 6)

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**C. Procedural History**

1) The defendant company filed, against the plaintiff A, a petition for a trial for a defensive scope of rights, arguing that products of the defendant company as stated in [Appendix 3] do not fall within the scope of rights of the registered design at issue. The IPTAB reviewed the action under Case No. 2019Dang2527 and issued a decision to grant the above action brought by the defendant company on September 16, 2020, stating that the “above products of the defendant company are different from the registered design at issue in view of overall aesthetic features, such as overall appearance, density, shape, etc., of a small group net” (Defendants’ Exhibit 11). On October 20, 2020, the IPTAB decision became final and conclusive without change.

2) The plaintiff A accused the defendant D of a violation of the

Design Protection Act. However, on December 27, 2019, the Mokpo Branch Office of the Gwangju District Public Prosecutor's Office cleared the defendant D of suspicion (lack of evidence) (Defendants' Exhibit 10).

**[Factual basis]** Undisputed facts, statements, or images in the plaintiff's exhibits 1 through 3, 7, 10, and 20 or the defendants' exhibits 3, 4, 6, 10, and 11 (including exhibits with branching numbers, if any; hereinafter, the same shall apply, unless separately specified), the purport of the overall argument

## **2. Summary of Parties' Arguments**

### **A. Summary of Plaintiffs' Arguments**

1) A product of the defendants as stated in [Appendix 1] (hereinafter, the "defendants' product") is in a shape in which the center of the mesh would be widened, even if the defendants' product is not fixed with a pin, etc., and its appearance when being used and traded is as stated above. Also, considering the fact that the article to which the subject registered design is applied and the defendants' product may change in various shapes in accordance with the level of the distribution and use phase natural to their properties, the defendants' product shall be compared with the subject registered design in a state in which the former is completely unfolded without wrinkles caused by transportation, storage, etc., thereof.

2) The defendants infringed the design right of the plaintiff A, the holder of the registered design at issue, and the sole license of the plaintiff company, the sole licensee of the design, by producing and selling the defendants' product identical or similar to the subject registered design from 2016 to 2019.

## PATENT COURT DECISIONS

3) Therefore, the plaintiffs seek, against the defendant, the suspension of infringing acts as stated in the plaintiffs' claim and the destruction of infringing products. In addition, they seek compensation for damages as the following: primarily, KRW 49,470,425, the amount of loss that the plaintiffs suffered due to an infringing act of the defendants from 2016 to 2019 under Article 115(3) of the Design Protection Act (KRW 27,286,275, which is the profit that the defendant company obtained from the delivery to Soan Nonghyup (sales of KRW 321,015,000  $\times$  standard income rate of 8.5%), + KRW 22,184,150, which is the profit that the defendant company obtained from the delivery to other clients (sales of KRW 260,990,000  $\times$  standard income rate of 8.5%)); or secondarily, KRW 48,000,000 (KRW 12,000,000 per year  $\times$  4 years), attributable to a non-exclusive license fee under Article 115(4) of the Design Protection Act and damages for delay therefore.

### **B. Summary of Defendants' Arguments**

1) The defendants' product is in a shape of a small mesh not with a wide diamond shape at the center, but close to a straight line when it is in a natural state without artificial deformation. The shape of the defendants' product which the plaintiff argues is caused by artificial deformation, such as being widened by hands, being fixed to a floor with pins in a widened state, etc., and thus may not be viewed as an ordinary appearance of the defendants' product.

2) The subject registered design is used for laver cultivation nets, and its drawings also merely illustrate its shape as being fixed as laver cultivation nets. Thus, it may not be deemed that its shape naturally changes according to its function or its nature. Also, it is difficult to view that the appearance of the defendants' product is just as what is argued by the plaintiffs when used and traded. Moreover, it may not be deemed that its shape changes naturally according to its function or

its nature.

3) Therefore, when comparing the defendants' product in a shape formed by ordinary use and trade with the registered design at issue, they are not similar regarding a sense of beauty in its entirety. Thus, the defendants' product does not fall within the scope of rights of the registered design at issue.

### **3. Discussion**

#### **A. Whether the Registered Design at Issue is Similar to the Defendants' Product in Terms of Design**

##### 1) Standards for Determination

Whether designs are similar shall not be determined by comparing individual features that comprise the design separately, but rather by considering whether an ordinary observer is able to identify differing aesthetic features by comparing and contrasting each design's overall appearance. The most discernible features of the design that attract the ordinary observer's attention are to be perceived as the essential parts, and the question of similarity depends on whether the comparison of those features provides any aesthetic differences to the ordinary observers. (Supreme Court Decision 95Hu1135, decided January 26, 1996; Supreme Court Decision 2010Hu913, decided July 22, 2010).

The design rights are attached to the novel combination of shapes, patterns, and colors of an article. If a design is registered based on an application containing a publicly known shape and pattern, the publicly known parts shall not be the subject of sole and exclusive rights of the design's owner. Therefore, the importance of the publicly known parts should be assessed to a limited degree. Thus, even if a registered design and a design to be compared thereto contain publicly known parts identical or similar to each other, it may not be deemed that the

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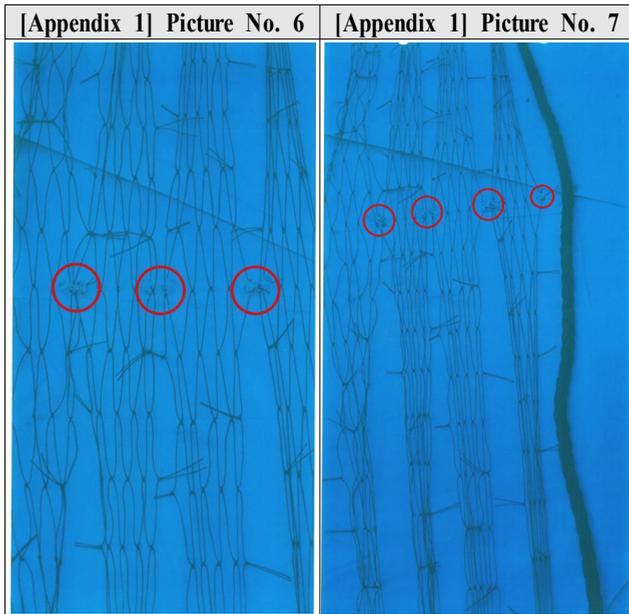
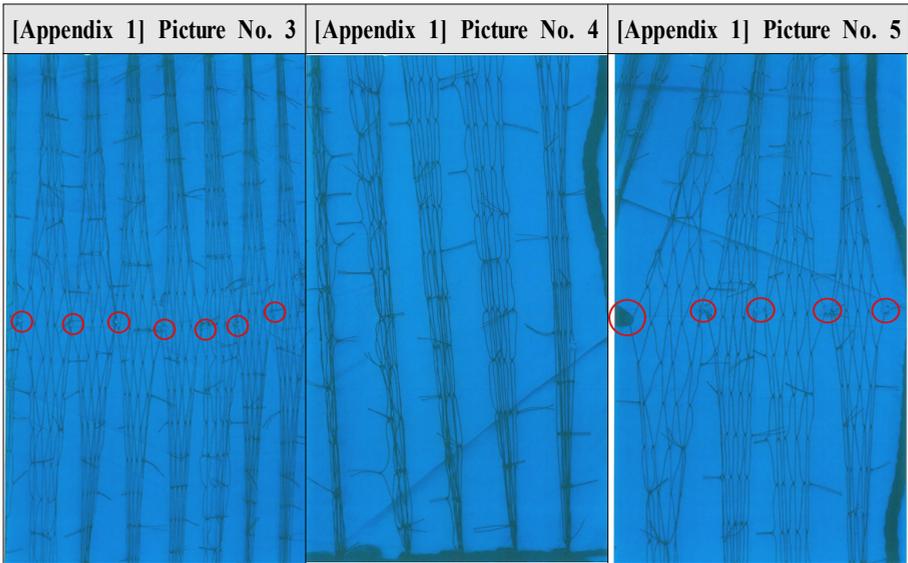
former falls within the scope of rights of the latter, provided that a characteristic part in excluding the publicly known part in the registered design is not similar to a corresponding part in the design to be compared (Supreme Court Decision 2003Hu762, decided August 30, 2004; Supreme Court Decision 2011Hu3586, decided April 13, 2012).

It is required to consider the aesthetic sense coming from the appearance not only when an article to which a design is applied is used, but also when the article is traded (Supreme Court Decision 2000Hu129 decided May 15, 2001). Where articles to which a design to be compared is applied change their shapes according to their function or nature, the similarity of their designs shall be determined in its entirety after comparing the respective changes of their shapes (Supreme Court Decision 97Hu3586 decided October 08, 1999).

### 2) Specification of the Defendants' Product to Be Compared with the Registered Design at Issue

a) It is difficult to deem, on the following grounds, that Picture Nos. 3, 4, 5, 6, and 7 disclosed in [Appendix 1] are the shape in which the defendants' product is ordinarily used and traded. Therefore, the defendants' product and the registered design at issue are compared based on Picture Nos. 1 and 2 disclosed in [Appendix 1], which seems to be the ordinary product shape in which no artificial deformation is applied to the defendants' product.

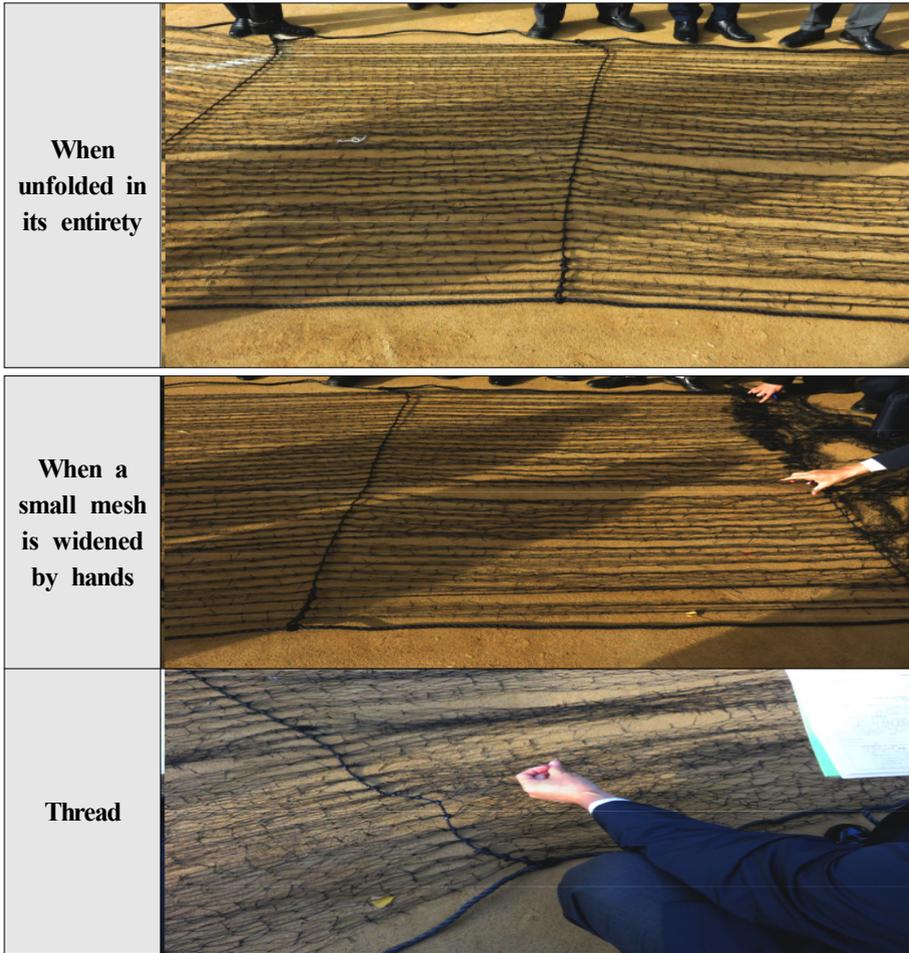
(1) As shown below, Picture Nos. 3, 4, 5, 6, and 7 disclosed in [Appendix 1] illustrate that a small mesh part of the defendants' product is in a diamond shape, being artificially widened by hands and then fixed with thumbtacks. Hence, it is merely a shape deformed by applying an external and physical force, and it is difficult to deem that it is the appearance when the defendants' product is ordinarily used and traded.



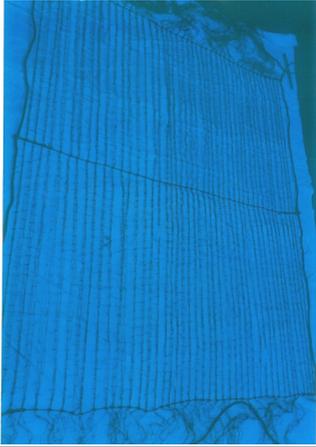
(2) According to the findings of verification by the District Court, small meshes are arranged in a shape close to a straight line in the defendants' product. However, where one of the small meshes is widened by hands and unfolded into one line, it becomes a

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shape similar to a diamond (See the correction to protocol dated November 26, 2019).



(3) It seems that Picture Nos. 1 and 2 disclosed in [Appendix 1] illustrate a state in which small meshes are unfolded naturally without applying external deformation, such as fixing after widening small meshes in the defendants' product by hands. Since such shape corresponds to the findings of verification by the District Court, it would be reasonable to compare, based on these, whether the defendants' product is similar to the registered design at issue.

[Appendix 1] Picture No. 1	[Appendix 1] Picture No. 2
	

b) Discussion of the Plaintiffs’ Arguments

(1) In this respect, the plaintiffs argue that the defendants’ product is in a shape in which its rear is swollen even when it is unfolded naturally without applying an artificial force.

However, each image in the plaintiffs’ exhibits 10-3, 10-4, 10-5, 10-6, and 10-7 is the same as Picture Nos. 3, 4, 5, 6, and 7 disclosed in [Appendix 1] and illustrates a shape in which small meshes are fixed with thumbtacks, etc., after applying an artificial force thereto. On the basis of the findings of verification by the District Court, etc., it is difficult to acknowledge that each image in the plaintiffs’ exhibits 10-8, 10-9, 10-10, 17, 18, and 19 shows an appearance of the defendants’ product when they are ordinarily used and traded. Rather, as stated in the table below, in light of each image in the defendants’ exhibits 3, 7, and 8, the defendants’ product is in an irregular shape close to a straight line when the small meshes are not artificially manipulated. In combining a rope for supporting meshes and small meshes, the registered design at issue is combined in a “+” shape



without knots like “ ” and it seems to be designed so that diamond-shaped small meshes could be unfolded bisymmetrically. On

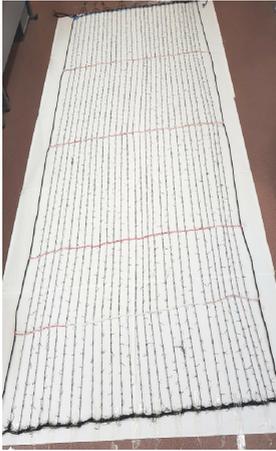
**PATENT COURT DECISIONS**

the other hand, the defendants' product is combined in a knot shape

like “” (Plaintiffs' Exhibit 10-1), “” (Defendants'

Exhibit 8-4), or “” (Defendants' Exhibit 6, the registered

design of the defendant company). Hence, it seems that the small meshes are configured in a shape of an irregular straight line and not bisymmetrical, and that the defendants' product is manufactured or designed to have mesh-type nets formed irregularly therein. Therefore, the plaintiffs' argument in this respect shall not be accepted.

Defendants' Exhibit No. 3	Defendants' Exhibit No. 7-1	Defendants' Exhibit No. 8-4
		

(2) The plaintiffs argue the following: an article to which the registered design at issue is applied and the defendants' products are subject to various changes in shape according to the level of distribution and use stage due to their nature; and thus, in light of such changes, the defendants' product shall be compared with the registered design at issue in a state in which small meshes are unfolded or fixed from side to side.

However, it would be reasonable to deem that the disclosure “where a shape of the subject article is changed naturally according to its function or attribute” refers to a case where, as it is expected that a shape of the design itself would change, the shape of the subject article would change naturally to a predetermined shape according to its function or attribute. The plaintiffs and the defendants stated at the date for the first pleading of the case that “in a process to sell laver cultivation nets, advertising pictures, catalogs, etc., of a product with a shape in which meshes are unfolded as illustrated in the registered design were not produced or presented to consumers.” It is difficult for ordinary consumers to acknowledge the deformed shape as natural according to the function or attribute of the defendants’ product, which is small meshes artificially deformed by applying an external force, such as fixing with thumbtacks after widening it with hands.

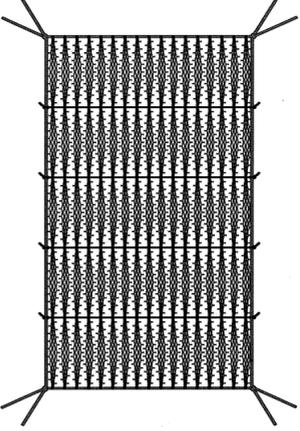
Also, it is impossible to know, only with the content of the written application of the registered design at issue and drawings attached thereto, what kinds of change in the shape of the article to which the registered design shown above is applied would be subject to. Also, the drawings only illustrate a shape in which the meshes are fixed to synthetic fabric ropes with a rectangular shape, and there is no data verify that it is a natural change according to its function or attribute. Thus, the plaintiffs’ argument in this respect is not accepted, either.

3) Whether the Registered Design at Issue is Similar to the Defendants’ Product

a) Comparison of the Registered Design at Issue with the Defendants’ Product

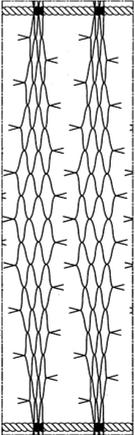
The comparison of the registered design at issue and the defendants’ product (Pictures 1 and 2 disclosed in [Appendix 1]) is as shown in the table below:

PATENT COURT DECISIONS

Registered Design at Issue	Defendants' Product (Pictures 1 and 2 in [Appendix])
	

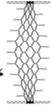
b) Commonalities

The registered design at issue and the defendants' product are similar in terms of the following facts: ① as a laver cultivation net that enables many laver spores to survive by expanding a surface with threads for spore survival at the end of small meshes, the edge is formed with synthetic fiber ropes in a long rectangular shape, and a plurality of mesh support ropes are installed to be connected horizontally; ② small meshes are formed in a row at a regular interval in the mesh support rope; and ③ threads are formed on the small meshes.

	
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c) Differences

Meanwhile, the registered design at issue and the defendants' product are different in terms of the following facts: ① As to an area

taken up by small meshes, it is formed fairly widely like “” in the

registered design at issue, but it is formed narrowly like “” in the

defendants' product. ② In terms of the shape of the small meshes, in the registered design at issue, their upper and lower parts connected to the mesh-support ropes turn narrow, and their back is swollen and the small meshes are connected and arranged in a plurality of diamond shapes. On the other hand, the defendants' product is in the shape of a straight line as a whole and a shape of the mesh is not clear. ③ As to the shape of the thread, the registered design at issue has the “V”-shaped thread formed irregularly at the end of the left and right

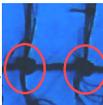
sides in the small meshes like “.” On the other hand, the defendant's product has the threads in a shape of an irregular line like

“.” ④ As to the shape of the small meshes, those in the

registered design at issue are in a shape of a diamond as a whole, and small diamond-shaped meshes are combined therein. On the contrary, the defendants' product has them in a shape of a straight line, and irregular mesh-type nets are combined therein. ⑤ In terms of the combination of the mesh support rope and small meshes, the registered design at issue combines them in a “+” shape without knots like

“.” On the other hand, the defendants' product combines them

PATENT COURT DECISIONS

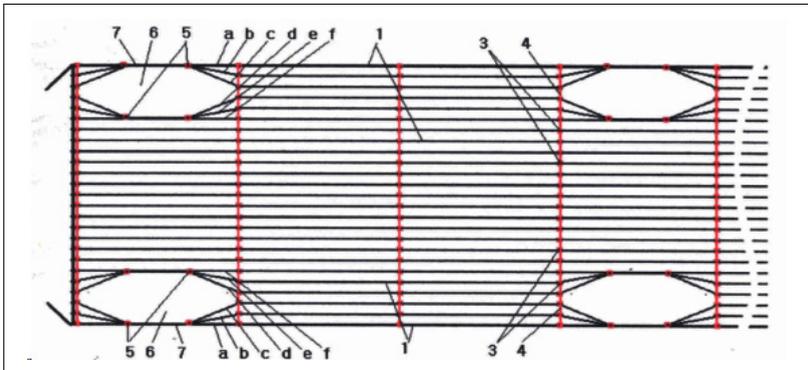
in knot shapes, such as “” (Plaintiffs’ Exhibit 10-1) or

“” (Defendants’ Exhibit 8-4), etc.

d) Analysis

In light of the evidence above and the purport of the overall argument, the registered design at issue and the defendants’ product would cause ordinary consumers to feel different aesthetic senses viewed in its entirety. Hence, it may not be deemed that the registered design at issue and the defendants’ product are identical or similar.

(1) A design that has ordinarily been used in laver cultivation nets even before the registered design at issue was registered is in the shape of lines in which a plurality of small meshes are connected to support ropes. Its’ overall shape is as illustrated below. The registered design at issue is similar to the defendants’ product as examined in commonalities ① and ② above. Since they were already known in the existing laver cultivation nets, their significance shall be evaluated to below. Thus, of the overall design in the registered design at issue, the following are parts that may easily draw the attention of purchasers: a difference in an area taken up by the small meshes; a difference in the shape of the small meshes; and the shape, pattern, etc., of the threads.



When compared with an ordinary shape of a laver farming net, as shown above, the registered design at issue features the following: a diamond-shaped small mesh becomes wide in the middle and thus forms a shape of a diamond as a whole; and V-shaped threads are formed regularly on both sides of each small mesh.

(2) Of the differences shown above, ① to ⑤ constitute an essential part of the registered design at issue and the defendants' product and relate to the following: the area taken up by the small meshes; the shape and pattern of the small meshes; the shape of the thread; and the combination of the mesh-support rope and the small meshes. These account for a large portion thereof and correspond to a difference of a dominant feature as a part that could easily draw the eyes and attention of observers when being used and traded.

(3) Hence, due to the difference in the area taken up by the small meshes in laver cultivation nets, the shape and pattern of the small meshes, the density and arrangement, the shape of the thread, etc., the registered design at issue has a complex and delicate impression as a whole. On the other hand, it appears, in the defendants' product, that the small meshes are loose and irregular. Thus, their aesthetic senses are not identical or similar.

## **B. Summary of Discussion**

As examined above, the defendants' product may not be viewed as identical or similar to the registered design at issue. Thus, it may not be deemed that the defendants' product falls within the scope of rights of the registered design at issue. Therefore, the claim of the plaintiffs premised that the defendants' product infringes the registered design right of the plaintiff A and the sole license of the plaintiff company is without merit in its entirety and is without further examination.

#### 4. Conclusion

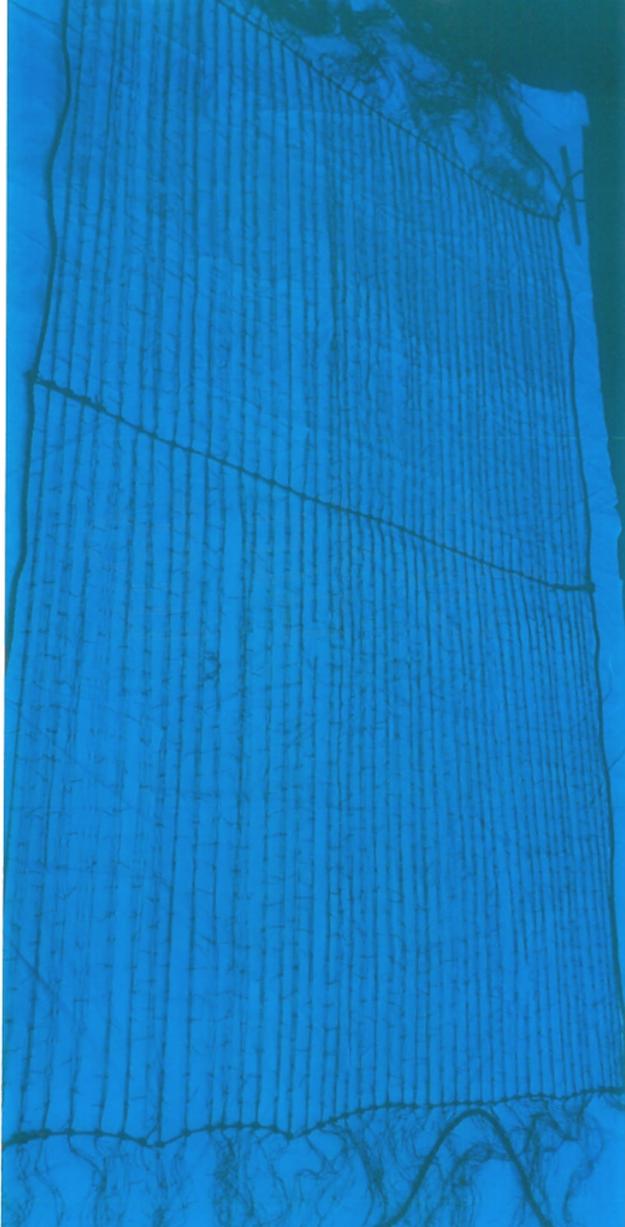
Accordingly, the plaintiffs' petition against the defendants is without merit and thus, shall be dismissed in its entirety. The District Court's decision is consistent with the above analysis and shall be upheld. An appeal of the plaintiffs against the defendants is without merit and shall be dismissed. It is so decided as ordered.

Presiding Judge	Kyuhong LEE
Judge	Sungyop WOO
Judge	Eunhee PARK

[Appendix 1]

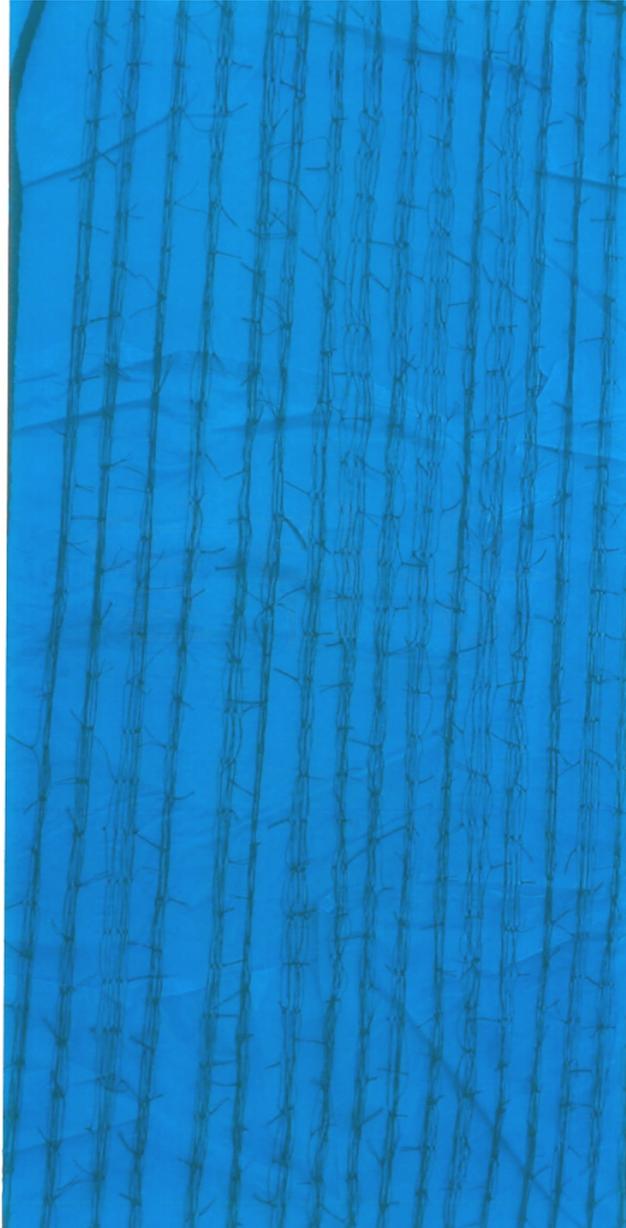
**Defendants' Product**

1.



**PATENT COURT DECISIONS**

2.

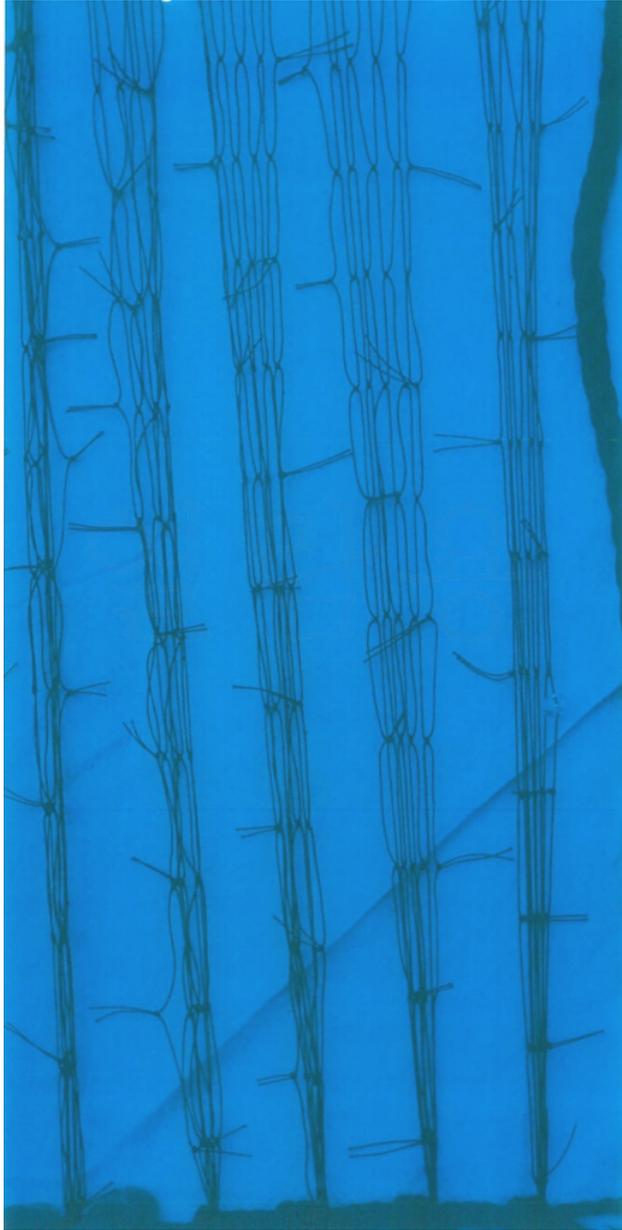


3.

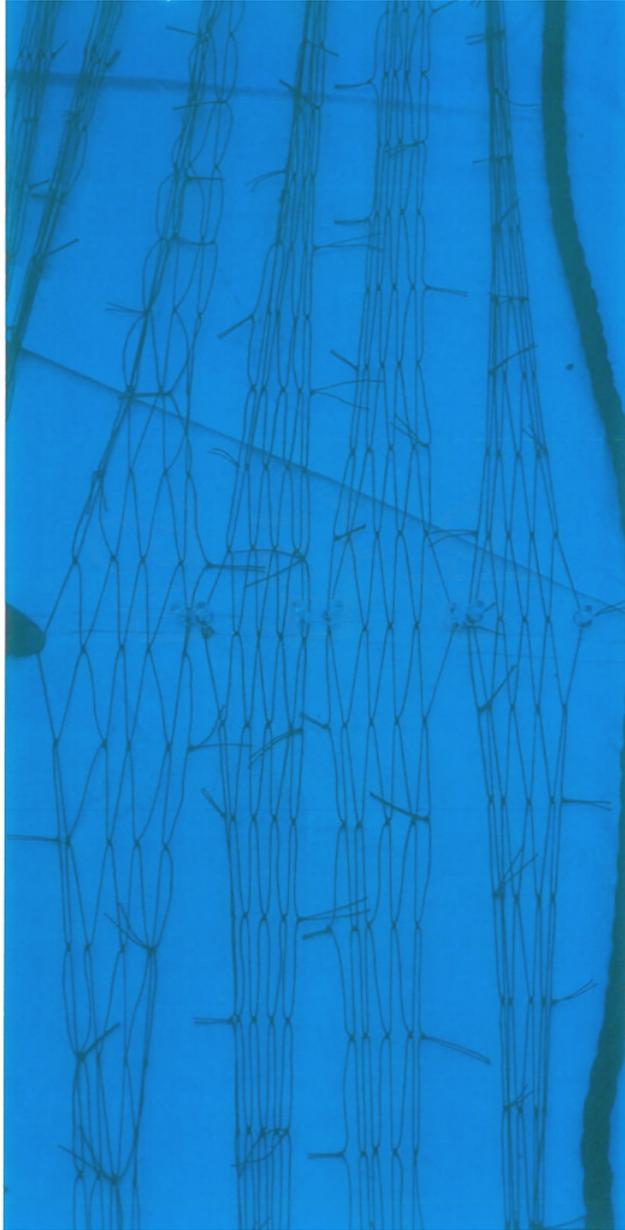


**PATENT COURT DECISIONS**

4.

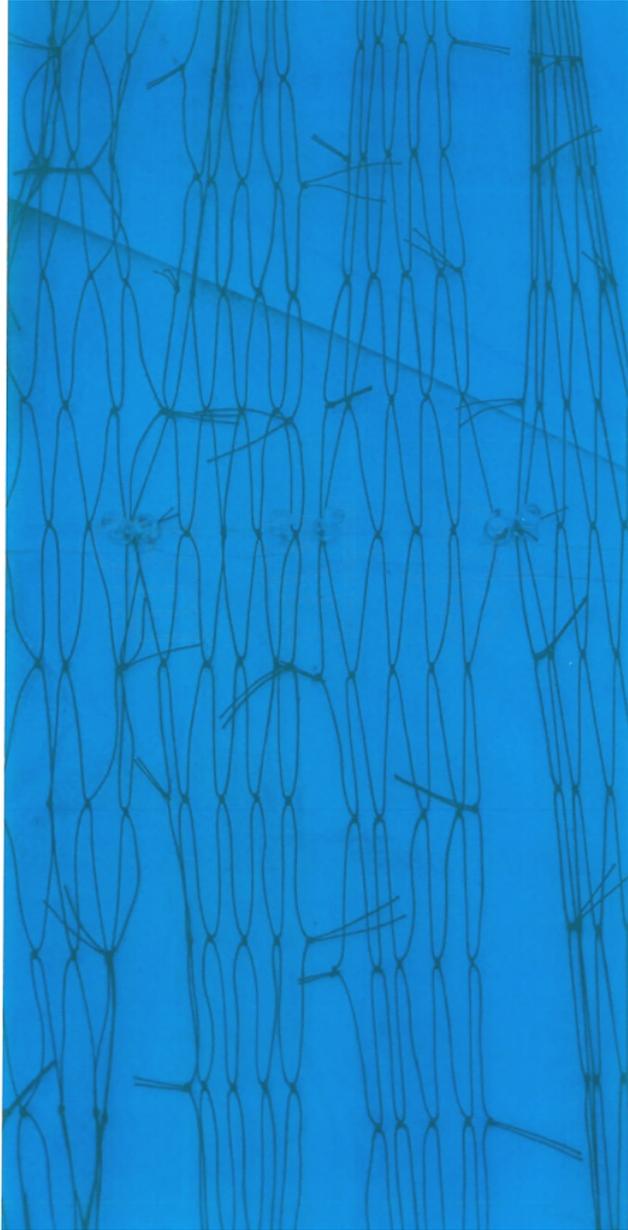


5.

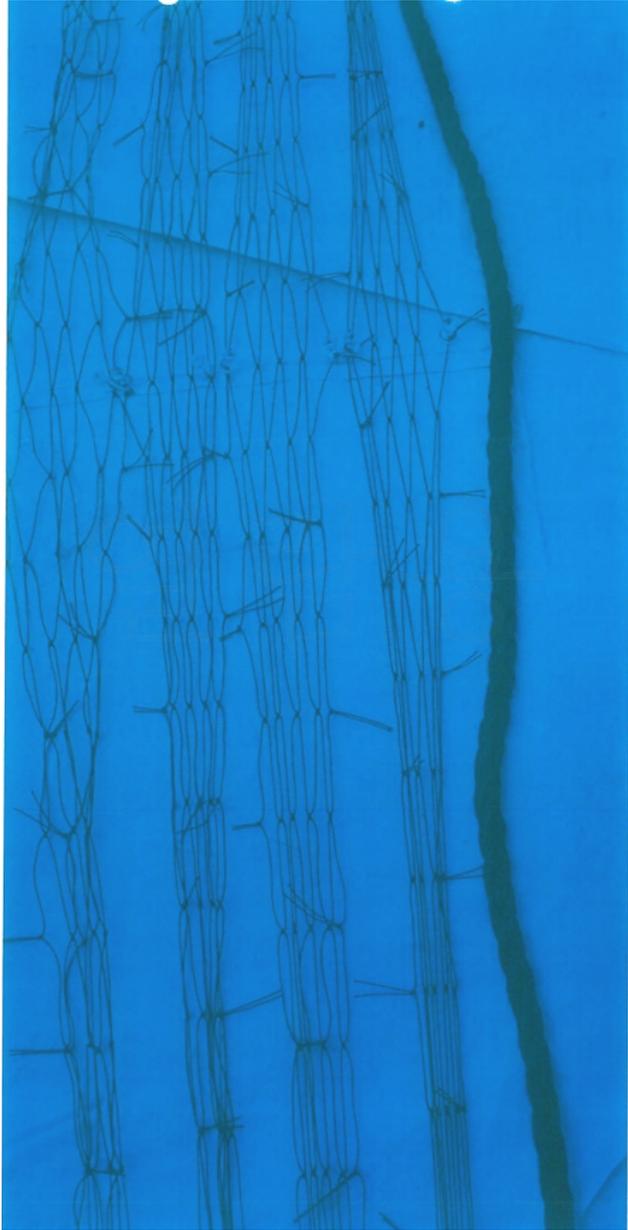


**PATENT COURT DECISIONS**

6.



7.



[Appendix 2]

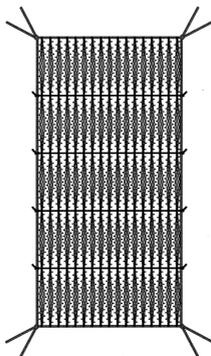
### Registered Design at Issue

[Description of Design]

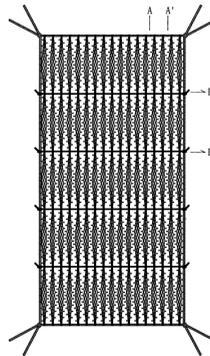
1. Its materials are rope and nylon.
2. The present design is used as a laver farming net. Further, the present design is to improve production drastically by increasing a surface area of meshes and enabling much more laver spores to survive as the threads for spore survival are formed at an end of small meshes.
3. An overall shape of the present design is rectangular, and a plurality of mesh support ropes are formed at a certain interval horizontally inside synthetic fiber ropes which are connected in a diamond shape, and the small meshes with small areas at the top and bottom parts are arranged at a certain interval, and the threads are extended at an end of left and right sides of the small meshes.

[Gist of Design Creation]

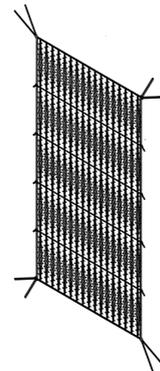
The gist of design creation of the present design is the combination of a shape and pattern of laver cultivation nets.



Rear view

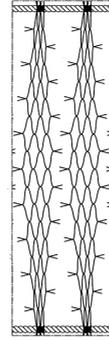
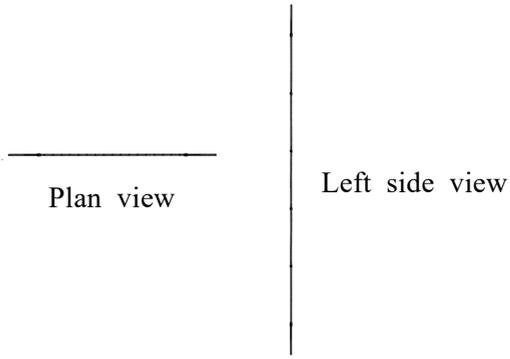


Front view



Perspective view

**Laver Cultivation Net Case**

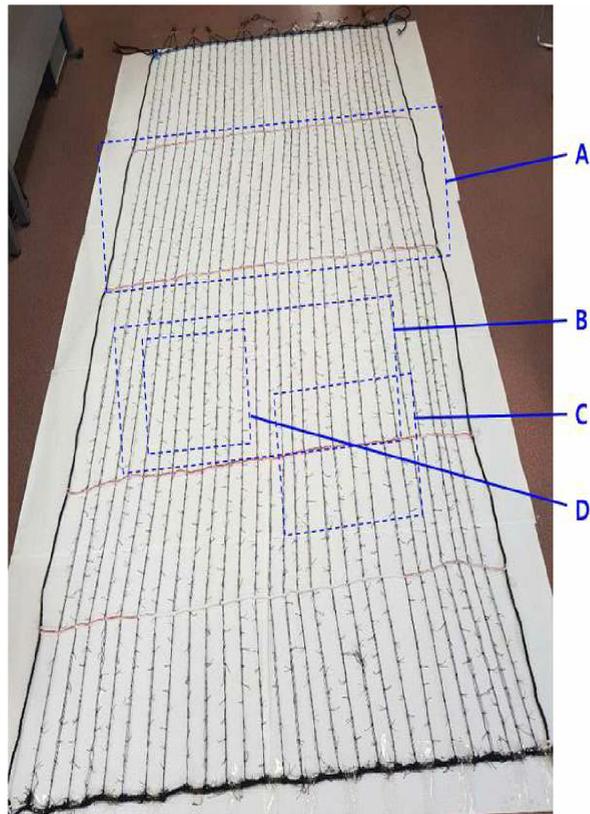


Reference Drawings  
A-A', B-B' Exploded  
Enlarged View

PATENT COURT DECISIONS

[Appendix 3]

**The Design for Review in Defensive Scope of Rights Trial Filed  
by the Defendant Company against The Plaintiff A (IPTAB  
Decision, 2019Dang2527)**



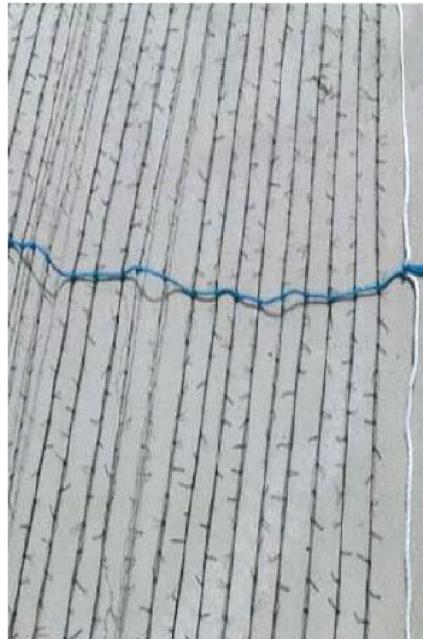
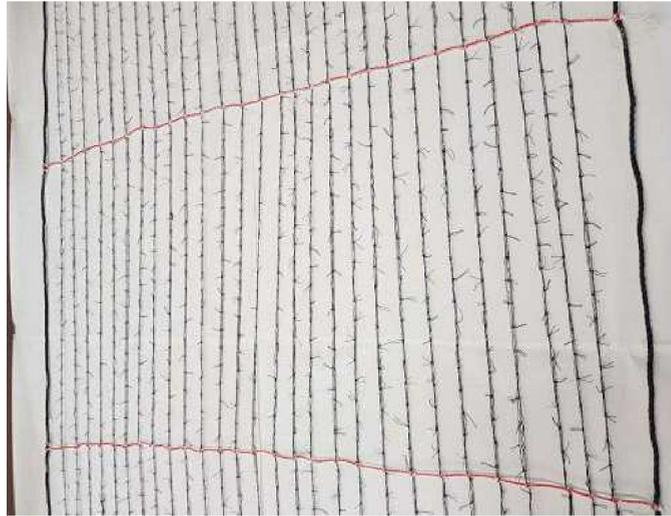
[Perspective View]

Laver Cultivation Net Case



PATENT COURT DECISIONS

[Enlarged Part A]



Laver Cultivation Net Case

[Enlarged View of B]

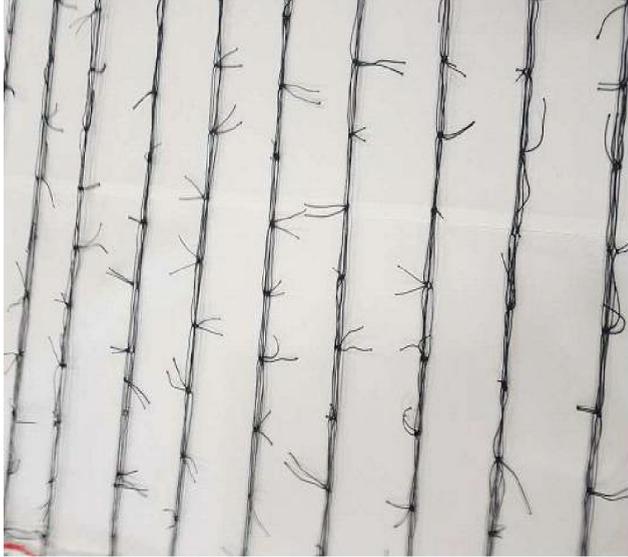


[Enlarged Part C]



**PATENT COURT DECISIONS**

[Enlarged Part D]



**PATENT COURT OF KOREA**  
**SECOND DIVISION**  
**DECISION**

**Case No.** 2020Heo5412 Scope of Rights  
Confirmation (Design)

**Plaintiff** A  
Counsel for Plaintiff  
Patent Attorney Sangyeol Lee

**Defendant** B  
Counsel for the Defendant  
Patent Attorney Jiwon Jeong

**Date of Closing Argument** April 16, 2021

**Decision Date** May 07, 2021

**ORDER**

1. The plaintiff's claim is dismissed.
2. The cost arising from this litigation shall be borne by the plaintiff.

**PLAINTIFF'S DEMAND**

The IPTAB Decision 2019Dang3417, decided July 14, 2020, shall be revoked.

## OPINION

### 1. Background

#### A. Plaintiff's Registered Design at Issue

- 1) Filing date of Application/ Date of Registration/ Registration Number: October 24, 2018/ May 21, 2019/ No. 1008024
- 2) Title of Article: A Headboard
- 3) Description and Drawings of Design: As stated in Appendix 1

#### B. The Challenged Design

The present design relates to a headboard of a bed produced by the defendant and sold by C and D Co., Ltd. (the original name of the company: E Co., Ltd., hereinafter, "D" irrespective of the change of the company name)

#### C. Prior Designs

- 1) Prior Design 1 (Defendant's Exhibit 2)

This relates to a design of a headboard whose picture is sent, on September 19, 2018, through KakaoTalk messenger by F, who is a representative of D, to G ("Chocochoou"), who is an employee of D. A picture thereof is as shown below.

- 2) Prior Design 2 (Defendant's Exhibit 1)

This relates to a design of a headboard whose picture was taken, on October 16, 2018, in I studio and sent to H email of D on October 23, 2018. A picture thereof is as shown below.

3) Prior Design 3 (Defendant’s Exhibit 3)

This relates to a design of a headboard that K, who operates “J”, registered on April 26, 2018, with L (www.L), which is an integrated shopping mall management site. A picture thereof is as shown below.

4) Prior Design 4 (Defendant’s Exhibit 4)

This relates to a design of a headboard that has been sold by a furniture store named “M” since March 13, 2018. A picture thereof is as shown below.

5) Pictures of the Prior Designs



**D. IPTAB Decision**

1) On October 31, 2019, the plaintiff petitioned for an

## PATENT COURT DECISIONS

affirmative scope of rights trial with the Intellectual Property Trial and Appeal Board (hereinafter, the “IPTAB”) against the defendant, arguing that “the challenged design and the registered design at issue are all for a headboard, and the former is similar to the latter and falls within the scope of rights of the latter.”

2) The IPTAB reviewed the above petition, numbering the case as 2019Dang3417 and, on July 14, 2020, determined that “the challenged design corresponds to a freely practiced design as prior design 2 publicly disclosed before the application for the registered design at issue was filed and thus does not fall within the scope of rights of the registered design at issue.” Thus, the IPTAB rendered its decision to dismiss the above petition for trial filed by the plaintiff.

**[Factual basis]** Undisputed facts, statements, and images in the plaintiff’s exhibits 1 through 5 and 12 and in the defendant’s exhibits 1 through 7, and the purport of the overall argument

## 2. Summary of Parties’ Arguments

### A. Plaintiff

The challenged design and the registered design at issue have in common an article to which a design is applied. Also, both designs have similar dominant features and create an identical or similar aesthetic impression as a whole. Therefore, the challenged design is a design that is identical or similar to the registered design at issue and falls within the scope of rights of the registered design at issue. Also, the challenged design is not a freely practiced design. Thus, the IPTAB decision is inconsistent with the above analysis and shall not be upheld.

## **B. Defendant**

1) The registered design at issue is substantially identical to prior designs 2 or 3, which were publicly known or practiced before the filing of the application for design registration, and thus its scope of rights is not recognized. Alternatively, the registered design at issue could be easily created by a person having ordinary skill in the art of furniture by combining prior designs 3 and 4. Thus, its scope of rights is not acknowledged.

2) The challenged design is a freely exploited design that could be easily created by a person having ordinary skill in the art of furniture from prior designs 1, 2, or 3. Thus, the challenged design does not fall within the scope of rights of the registered design at issue without comparison therewith.

## **3. Discussion**

First, we will examine the defendant's argument for a freely practiced design.

### **A. Parties' Arguments**

The defendant makes a plea of a freely practiced design, arguing that prior designs 1, 2, and 3 were publicly known as being able to be recognized by many and unspecified persons before the filing of the application for the registered design at issue.

In this respect, the plaintiff argues that prior designs 1, 2, and 3 may not be viewed as publicly known designs on the following grounds: pictures of prior designs 1 and 2 were taken, as N, who is the father of the plaintiff, provided finished beds and prototypes for O, who is the father of the defendant, in order to deliver them to D;

## PATENT COURT DECISIONS

persons, such as O, D, etc., to whom a picture file of prior designs 1 and 2 were delivered, were obliged for confidentiality under the principle of good faith or implied covenant; and prior design 3 was not in a state to be able to be recognized by many and unspecified persons. Moreover, the plaintiff argues that the defendant may not make a plea of a freely practiced design on the following grounds: even if prior designs 1 and 2 correspond to publicly known designs before the filing of the application for the registered design at issue, each design shown above originated from the plaintiff; and thus it falls under an exception to the lack of novelty under Article 36(1) of the Design Protection Act.

### **B. Discussion on Freely Practiced Design based on Prior Design 2**

#### 1) Whether Prior Design 2 Is a Design Publicly Known before The Application for The Registered Design at Issue was Filed

##### a) Established Facts

The following facts may be established in light of the statements in the plaintiff's exhibits 6-1 to 4, 7 to 10, 14, and 16 and the defendant's exhibits 1 and 2, and the purport of the overall argument:

(1) The plaintiff is engaged, together with his/her father N, in the manufacturing and sales of furniture under the company name "P." Further, the defendant is engaged, together with his/her father O, in the manufacturing and sales of furniture under the company name "Q."

(2) N made a headboard like prior design 1 and, around August 28, 2018, showed the same to O. In response, O suggested that N sell the product online and N agreed thereto.

(3) O delivered to D a product like prior design 1 purchased from N. Further, on September 19, 2018, F sent a picture of the product to G, who is his/her employee.

(4) O manufactured a product like prior design 2 using a

component of prior design 2 purchased from N and, on October 16, 2018, took a picture of the product of prior design 2 and, on October 23, 2018, e-mailed the same to D through I studio.

b) Discussion

A publicly known design means that the design is in a state that may be known to the unspecified number of people. As examined above, a picture was taken of a product to which prior design 2 is applied and transmitted to D in a format of a file before the application for the registered design at issue was filed. Therefore, it may be deemed that it is a publicly known design unless there are special circumstances.

On the other hand, it may not be deemed that the design is publicly known if the design is known or recognized only to those who are obliged for confidentiality before an application for design registration was filed. However, a person who denies whether a design was publicly known shall bear the burden of proof for the existence of confidentiality. According to the statements in the plaintiff's exhibits 6-3 and 6-4, it is acknowledged that N and O were engaged in the same industry and very close to each other. However, it may not be acknowledged, as known from the established facts above, that there was a confidentiality agreement among N, O, D, etc., and there is no other evidence in light of the following facts: a picture was taken for prior design 2 in order to commercialize products online; and the picture file was transmitted to an online sales company by email. Thus, the plaintiff's argument that prior design 2 cannot be a publicly known design on the premise of the existence of a confidentiality agreement is without merit.

2) Whether The Argument of A Freely Practiced Design Based on Prior Design 2 Is Accepted

Article 36 of the Design Protection Act stipulates that even if a design of the person who has a right to register the design is publicly

## PATENT COURT DECISIONS

known before an application for design registration is filed, it shall not be deemed to be a publicly known design in determining, as requirements for design registration, whether the design is novel and easy to create, provided the design meets some requirements (hereinafter, “exceptions to lack of novelty”).

The plaintiff argues that, where a publicly known design falls under the exceptions to lack of novelty, a plea of freely practiced design by a third party based on the publicly known design may not be allowed. However, the plaintiff’s above argument cannot be accepted on the following grounds, and a plea of freely practiced design based on prior design 2 can be allowed:

① Exceptions to lack of novelty only specify that a publicly known design would not be viewed as being disclosed in determining the “requirements for design registration.”

② In principle, a design in the public domain before an application for its registration is filed shall not be monopolized by someone and shall be able to be practiced freely by anyone (Articles 33(1) and (2) of the Design Protection Act). However, if the principles of novelty and non-easiness of creation are applied too strictly, the right of the person who registers a design is also likely to be restricted, and thus it would become unfair or be contrary to the purpose of the Design Protection Act to promote the development of the industry. Therefore, exceptions are established regarding design registration “as long as not violating rights and benefits of a third party” and the determination of validity (Supreme Court Decision 2014Hu1341, decided January 12, 2017).

③ If exceptions to lack of novelty make it impossible to make a plea of freely practiced design based on the publicly known design, it would be against the purpose of exceptions to lack of novelty to promote the fairness as long as an interest of a third party would not be damaged. In particular, the existing Design Protection Act greatly extends the duration of time, allowing procedural requirements to be met by stipulating that exceptions to lack of

novelty may be acknowledged until a response is submitted regarding the invalidation of the registration of a design trial.

④ The legal principle of freely practiced design only compares the publicly known design with the “challenged design” to solve a dispute in a rational manner but does not compare a registered design. Therefore, according to the plaintiff’s above arguments, whether a freely practiced design satisfies each requirement for exceptions to determine novelty and non-easiness of creation of a registered design in terms of “its relation with the registered design” shall be determined first. Therefore, it does not correspond to the purpose of allowing a plea of freely practiced design as stated above.

⑤ The requirements to apply exceptions to lack of novelty do not lie in the identity or similarity between a claimed design and a publicly known design. Also, the determination of the scope of rights of a registered design is different from a plea of freely practiced design in terms of what shall be compared and determined. Thus, even if a plea of freely practiced design is allowed based on the publicly known design to which exceptions to lack of novelty are applied, it may not be deemed that there would be no benefit in allowing the registration as acknowledging exceptions to lack of novelty to its design right.

⑥ If a person who directly received a design product created by a specific person uses the design product before its design right application is filed in an unfair way, violating the purpose for which the design product was provided, the design right may be protected by other laws, such as the Unfair Competition Prevention and Trade Secret Protection Act, etc. In this regard, relief is not sought only within the Design Protection Act.

#### 4) Whether the Challenged Design Constitutes a Freely Practiced Design

According to the evidence examined above, the challenged design

## PATENT COURT DECISIONS

and prior design 2 share common features as the followings: ① having a gallery-type latticed door on both sides of the top of a headboard, in which a plurality of transverse lattices are combined with window frames; and ② having a relatively long rectangular space inside the top of the headboard and a curved rack over the top, viewed from the side. Also, the two have no particular difference, except that a latticed door in the challenged design can move, unlike in the registered design at issue. Thus, the challenged design may be viewed as a freely practiced design that could be easily created from Prior Art 2 by a person having ordinary skill in the art of furniture and does not fall within the scope of rights of the registered design at issue without the comparison of with the registered design at issue of the plaintiff.

### 4. Conclusion

Accordingly, the IPTAB decision that the challenged design does not fall within the scope of rights of the registered design is consistent with the above analysis and shall be upheld. Thus, the plaintiff's claim to revoke the IPTAB decision is without merit and is therefore dismissed. It is so decided as ordered.

Presiding Judge	Sangwoo KIM
Judge	Hyejin LEE
Judge	Young Gi Kim

[Appendix 1]

## **The Registered Design at Issue**

[Article to which design is applied]

Headboard for a bed

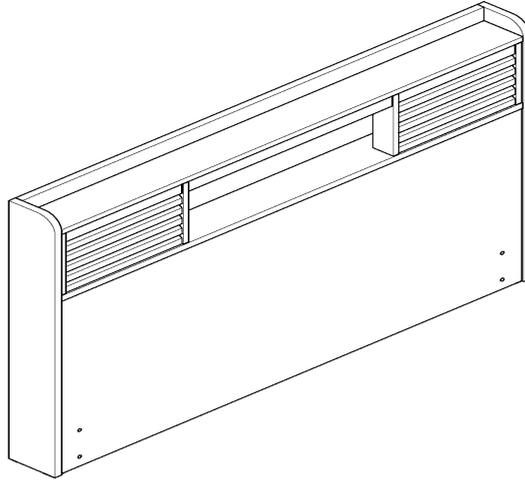
[Description of design]

1. The materials are wood, metal, and synthetic resin.
2. An article of the present design relates to a headboard for a bed. As illustrated in Reference FIG. 1.1, an LED that can adjust brightness is embodied inside the top of the headboard.
3. FIG. 1.1 represents an overall shape of the design.
4. FIG. 1.2. represents the front of the design.
5. FIG. 1.3 represents the rear of the design.
6. FIG. 1.4 represents the left side of the design. Additionally, the right side of the design is omitted as it is symmetric to its left side.
7. FIG. 1.5 represents the plane part of the design.
8. FIG. 1.6 represents the bottom part of the design.
9. FIG. 1.1 is a photograph substituted for a drawing that represents a mood light embodied inside the top of the design.

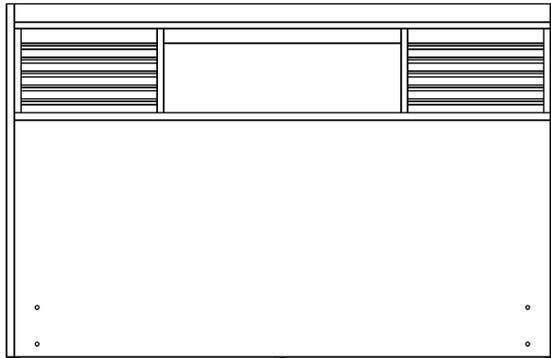
[Gist of Design Creation]

A gist of design creation is the combination of shape and appearance of the “headboard for a bed.”

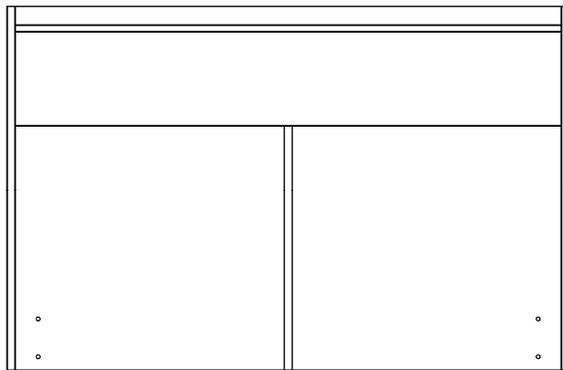
PATENT COURT DECISIONS



[FIG. 1.1]



[FIG. 1.2]



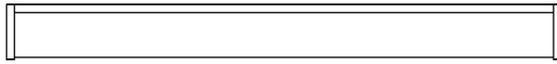
[FIG. 1.3]

Headboard Case

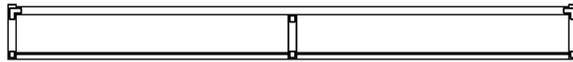
[FIG. 1.4]



[FIG. 1.5]



[FIG. 1.6]



[Swatch-type Drawing. 1.1]

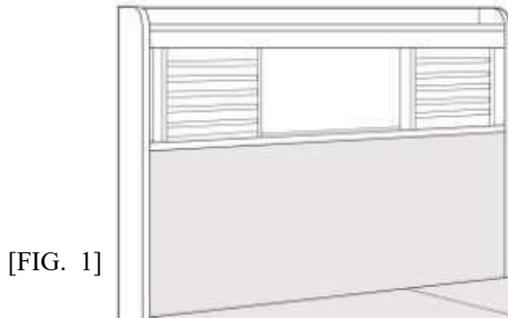


[Appendix 2]

### Challenged Design

1. An article to which the challenged design is applied Headboard for a bed
2. Description of the challenged design
  - ① The materials are wood, metal, and synthetic resin.
  - ② As illustrated in FIGs. 1 and 2, which are a perspective view, 2 transverse gallery-type latticed doors are applied on both sides at the top of the headboard.
  - ③ As illustrated in FIGs. 2 and 3, a mood light (LED) that can adjust brightness is embodied inside the top of the head together with a switch thereof.
  - ④ As illustrated in FIGs. 2 and 3, which show a lighting state, an aesthetic sense is created as a light of the LED illuminates delicately through 2 gallery-type latticed doors on both sides at the top of the head.
  - ⑤ As illustrated in FIGs. 2 and 3, which show a use state, there is a space inside the top of the head and an open space named “above rack” at an upper part of the top of the headboard as well.
  - ⑥ FIG. 4 is a drawing illustrating the challenged design posted on the R website (Plaintiff’s exhibit 3: a printed material from web-site R on October 30, 2019) where the challenged design is sold. FIG. 4 shows an overall use state of the headboard.

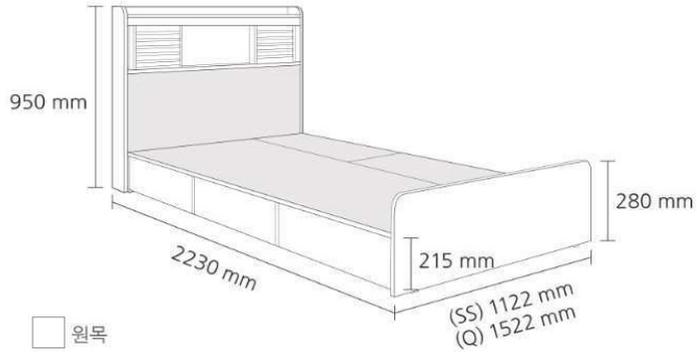
3. Drawings of the challenged design



\* As the design of the product is modified, the actual product has **only one LED at the center.**



## DIMENSION



[FIG. 4]



 Hardwood

 Used plywood to improve durability

**(W)**1122 / 1522 X **(D)**2230 X **(H)**950 mm

1. Size of the body: 1122 / 1522mm X 2060mm X 215mm
2. Size of Footboard: 1122 / 1522mm X 18mm X 280mm
3. Size of the headboard: 1122 / 1522mm X 150mm X 950mm

\* In the case of custom-made products, the size may vary depending on the method and position of the measurement.