PATENT COURT DECISIONS

2018

International IP Law Research Center of
Patent Court of Korea

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Homepage "http://patent.scourt.go.kr"

Court Publications Registration Number
32-9740146-000864-10
ISBN 977-24-68044-00-3-65

FOREWORD

Since its opening in 1998 as the first IP-specialized court in Asia, the Patent Court of Korea has continuously evolved itself through transformation and innovation, reaching the historic milestone of the 20th anniversary in 2018. In celebration of the anniversary, the court published Collected Articles on Various IP Issues in Korean and English and has distributed it for domestic and international readers.

The court also installed International Divisions in June 2018 so that judicial proceedings may take place in foreign languages, in response to the growing number of international IP lawsuits, and the first oral argument was held at the Patent Court.

The Patent Court Decisions is an annual publication since 2015 with an aim to better introduce the court's patent trials and practices to foreign readers.

The numerous IP disputes heard by the court led to many meaningful decisions in 2018. Among them, eight patent cases, one trade secrets case, one trademark case, and two design cases are selected and introduced here. The patent cases deal with compensation for employee invention, patent term extension, indirect infringement, equivalents, patent correction, and written description requirements. The trade secrets case handles issue that the information at issue is eligible for trade secrets. The trademark case examined whether the trademark at issue was descriptive. Lastly, the design cases concern the similarity of designs applied to products commonly used in daily life.

I wish the Patent Court Decisions Vol. 3 for 2018 will provide meaningful introduction of the court's trials and practices to all, and I ask for the readers' continued interest in the court's activities and accomplishments in 2019. Thank you.

December 2018
Director of the International IP Law Research Center
Chief Judge of the Patent Court of Korea
Kyeongran Cho

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Whether Claim 1 satisfies the support requirements must be determined by whether, from the point of view of a skilled person, the items written in the claims and in the description of the invention must correspond with each other when seen based on the technology level at the time of the filing. However, at the time of Claim 1's application, the facts that the embolic agent limits the blood flow in blood vessels mechanically and that tirapazamine works as a bioreductive agent were already known. Then a skilled person reading the description of the invention disclosing the combined administration and administration order of tirapazamine and embolic agents, specific type of embolic agents, and anticancer effects of the combined administration would recognize that the description contains all items that correspond to Claim 1. We must not conclude that Claim 1 is supported by the description only when the description includes pharmacological data, etc. that can confirm the tumor treatment effect of Claim 1 or specific statements that can replace such data. In addition, Claim 3 of the Claimed Invention cannot be easily invented even if a skilled person combines Prior Art 1 with Prior Art 2 and thus its inventive step is not denied.

Correction 1 to the effect that the display structure is determined by the "position and size of application icon area" does not comply with how to determine the "display structure" shown in the specification and drawings of the patented invention. Therefore, Correction 1 of Claim 7 of the corrected invention is not a correction within the scope of the specification or drawings of the patented invention. Further, ① Correction 1 corresponds to a new embodiment because it is not the same as what is described in the specification or drawings of the patented invention; ② if a display structure is determined by the position and size of application icon area alone as is in the Correction 1, it leads to a new purpose and effect that is not consistent with the description of the patented invention before correction; ③ accordingly, Correction 1 may inflict unexpected harm to a third party. Then, Correction 1 substantially changes or extends the patent claim.

seems to have its own use, thus having other economic, commercial or practical uses that are commonly used and socially acceptable and there is no evidence to demonstrate that said item is used only for the manufacture of the toilet partitioning plate of the Claim 1 invention at issue or simply has theoretical, experimental or temporary usability for any item other than said patented item. Therefore, it is hard to say that the item of the invention for review is such that is used only for the manufacture of the item of the Claim 1 invention at issue. Thus, as the manufacture of the item of the invention for review cannot be deemed as an act of manufacturing an item used only for the item of the Claim 1 invention at issue, said manufacture is not an indirect infringement of the Claim 1 invention at issue.

Both inventions under Claim 2 and Prior Art 1 refer to “a method of manufacturing nail stickers,” all of which are process inventions. A process invention is an invention made up of a series of temporal steps for achieving a specific purpose. In the process invention, the order of discrete elements may cause a significant difference in working effects thus the temporal order is an essential element of the process invention. Therefore, the inventions under Claim 2 and Prior Art 1 are different from each other in their composition in that there is a difference in the order of 'compression' and 'drying' elements as described above. Moreover, the invention under Claim 2 has the core technical idea of adopting the order of 'drying after compression' as a means to achieve the goal of removing post-compression air bubbles contained in the printed layer, flattening the sticker surface to produce flat light, and preventing the smearing of ink, etc. It is difficult to see the difference in the time-series arrangement of the ‘compression’ and ‘drying’ elements of both inventions as no more than a simple change of the order, omission of existing steps, or replacement of other steps.

Ultimately, the difference in compositions of Claim 2 and Prior Art 1 is substantial, and the resulting effects of the two are significantly different. Thus the difference in the order of 'compression' and 'drying' of the two inventions

instinctive view regarding quality, effect, etc. of the designated goods.

Furthermore, according to ... (omitted), the term "environment friendly product" is widely used in products, such as "detergent", "shampoo", "laundry detergent", "plastic product," etc., which are identical or similar to the designated goods of the Subject Mark as a term to represent the quality or effect of the goods. Then, the custom in the course of trade is that the "environment friendly product" that has the above construction or concept of the Subject Mark is widely used to represent the quality, effect, etc. of goods.

In light of the concept of the Subject Mark, relationship with the designated goods, course of trade, etc., it would be difficult to recognize its distinctiveness to differentiate its own goods from other goods under the social norm, as it is a descriptive mark that directly indicates quality, effect, etc. of the designated goods. Also, it would not be appropriate to have a specific person monopolize the Subject Mark, as it is a mark whose use shall be open to all persons who are engaged in the same trade. Thus, the Subject Mark falls under Article 6(1)(iii) and 6(1)(vii) of the old Trademark Act.

The Registered Design and the Prior Designs are in common in relation to the dominant features ① and ③ to ⑥, and as it is acknowledged that said commonalities have a significant level of importance in their overall designs, are very prominent and contain the dominant features of the Prior Designs which have adopted the shape of aloe as a motif, such designs make the observer perceive an overall similarity in their aesthetic looks.

As the dominant features of the Prior Designs are novel and original, a relatively large range of similarity should be applied to determine design similarity. Thus, to see that the Registered Design is different from the Prior Designs in terms of aesthetic looks, the differences in the Registered Design should be such that can overpower said dominant features and provide aesthetic values or creativity sufficient to arouse a different aesthetic sense.

First, with regard to the difference ⓐ between the Registered Design and the

Prior Designs, although there seems to be some differences in this part from the perspective view and front/rear view, such differences are almost unnoticeable when observed from the side views. Furthermore, such variation can be regarded as ordinary, so it is hard to say that a new aesthetic sense is aroused from such differences. Next, with regard to difference ⓑ between the Registered Design and the Prior Designs, it does not seem reasonable to expect that most consumers or dealers will look at the top view of the container carefully at the time of use or sale, which means that it is not easy to recognize or find such minor differences and therefore, such variation has minor importance in the overall design and delivers a small level of aesthetic value. Finally, with regard to the difference ⓒ between the Registered Design and the Prior Designs, given that the Registered Design has three shallowly stepped profiles on each side, which has low importance in its overall design and still gives a smooth appearance as in the Prior Designs, and in actual products, such stepped profile is almost unnoticeable as shown in the comparison table below while these are embodiments, it is hard to say that such differences can induce different aesthetic sense that is beyond the common aesthetic sense originating from said dominant features.

The massage unit for skin care, which is the subject article of both designs, is an article that generates beauty treatment effects by the user holding the handle, rubbing the contact member on the skin surface, such as face, etc. and facilitating the permeation of cream, etc. Thus, the composition of the contact member with a constant inclined surface and the handle should be seen as the fundamental or functional shape that should naturally exist in an article that performs the said functions.

Also, the composition of the followings are, as illustrated in each drawing shown below, what has already been disclosed in the massage unit for skin care or beauty treatment device closely related thereto prior to the application of the Registered Design: (i) the connection member that connects the contact member and the handle; (ii) an elliptical inclined surface; (iii) LED display

member at the center of the inclined surface; (iv) the rear of the contact member in a form of curve that is convex outwards; and (5) the cylindrical handle with a diameter at the lower part wider than that at the upper part. Then there exist substantial differences that can offset some commonalities in both designs in the aspects of their shapes and forms. And the general consumers and traders that encounter both designs would feel different aesthetic senses as a whole from the said differences in both designs. Thus, the two designs are not similar.

PATENT COURT OF KOREA
TWENTY-FIRST DIVISION
DECISION

Case No.: 2016Na1899 Compensation for Employee Invention

Plaintiff-cross-appellant and appellee: A

Defendant-cross-appellee and appellant: Poongsan Corporation

District Court's Decision: Daejeon District Court Decision 2012GaHap37415 rendered on July 6, 2016

Date of Final Trial: August 31, 2017

Decision Date: November 30, 2017

ORDER

1. Including the plaintiff's petition expanded herein, the District Court's decision shall be amended as follows.

The defendant shall pay the plaintiff the amount of KRW 257,006,469, plus interest:

A. at a rate of 5 percent per annum for an amount of KRW 32,967,529 from January 10, 2013 to July 6, 2016, and at a rate of 15 percent per annum for said amount charged from July 7, 2016 until it has been paid in full;

B. at a rate of 5 percent per annum for an amount of KRW 17,532,471 from January 10, 2013 to November 30, 2017, and at a rate of 15 percent per annum for said amount charged from

December 1, 2017 until it has been paid in full; and

C. at a rate of 5 percent per annum for an amount of KRW 206,506,469 from November 4, 2016 to November 30, 2017, and at a rate of 15 percent per annum for said amount charged from December 1, 2017 until it has been paid in full.

2. The appraisal cost among the total costs arising from this litigation and 90% of the total cost arising from this litigation between the parties other than the appraisal cost shall be borne by the plaintiff. The remaining costs of litigation not borne by the plaintiff shall be borne by the defendant.

3. In Paragraph 1 above ordering monetary payment, the portion that was not declared to be provisionally executable by the lower court may be declared provisionally executable.

PLAINTIFF'S DEMAND AND DEFENDANT'S DEMAND

I. Plaintiff's Demand

The defendant shall pay the plaintiff the total amount of KRW 5,000,000,000 plus interest at a rate of 15 percent per annum charged from the day following service of the complaint until it has been paid in full.

(The plaintiff claimed a compensation of KRW 50,500,000 plus damages for delay in payment thereof in the lower court, and has expanded his demand in this court as stated above.)

II. Appellant's Demand

1. Plaintiff

The lower court's decision against the plaintiff specifying his

obligations as stated below shall be revoked. The defendant shall pay the total amount of KRW 17,532,471 plus interest at a rate of 15 percent per annum charged from the day following receipt of petition until it has been paid in full.

2. Defendant

Among the decision(s) made at the lower court, the ruling against the defendant shall be revoked, and the plaintiff's claim corresponding to the decision(s) revoked shall be dismissed.

OPINION

1. Background

A. Positions of the Parties

1) Poongsan Corporation (a different company from the current defendant that has been spun off from Poongsan Holdings Corporation as shown below) is a company founded on October 22, 1968 to be engaged in the manufacture and sale of copper, copper alloy materials, and processed products.
2) Poongsan Corporation changed not only its proper purpose businesses to dominate and develop businesses of its subsidiaries by acquiring and holding shares thereof on July 1, 2008, but also its company name, to Poongsan Holdings (hereinafter referred to as ‘Poongsan Holdings’ including Poongsan Corporation before the change of company name). On the same day, Poonsan Holdings spun off its manufacturing business related to copper processing and special products to establish the defendant (hereinafter referred to as ‘the defendant et al.’ to designate the defendant together with Poongsan Holdings).
3) The plaintiff joined Poongsan Holdings on September 10,

1993 and was assigned to jobs such as research and development, or quality control together with B who joined the company on October 9, 1988 (hereinafter referred to as 'the plaintiff et al.' when designating the plaintiff along with B). The plaintiff retired from the company on December 1, 2012.

B. Completion of Employee Invention at Issue and Patent Registration

1) On December 1, 1994, the plaintiff was appointed as the director of the materials development office at the Material Technology Research Institute located in Poongsan Holdings' Onsan factory. On the same day, B was appointed as the chief director of said Material Technology Research Institute.
2) While working at the Material Technology Research Institute in Poongsan Holdings' Onsan factory, the plaintiff et al. invented a "precipitate growth inhibiting high strength, high conductivity copper alloy and manufacturing process thereof" as an employee invention (hereinafter referred to as 'employee invention at issue'; further, each claim will be displayed in such way as 'Claim 1 employee invention at issue') and succeeded the right to obtain a patent to Poongsan Holdings. Poongan Holdings applied for a patent on said invention and obtained a registered patent as stated in the table below (hereinafter referred to as 'patent at issue').

1) Title of invention: Precipitate growth inhibiting high strength, high conductivity copper alloy and manufacturing process thereof
2) Filing date of application / Date of registration / Registration number: December 8, 1995 / July 29, 1998 / Patent-0157257
3) Claims
Claim 1: Precipitate growth inhibiting high strength, high conductivity

copper alloy which mainly consists of copper (Cu) and unavoidable impurities and contains 0.5 to 4.0 weight percent of nickel (Ni), 0.1 to 1.0 weight percent of silicon (Si), and 0.05 to 0.8 weight percent of tin (Sn), and whose precipitated particle size is no more than 0.5㎛

Claim 2: As to Claim 1 above, a precipitate growth inhibiting high strength, high conductivity copper alloy which contains 0.5 to 3.0 weight percent of nickel (Ni), and no more than 1 weight percent of iron (Fe) or cobalt (Co)

Claim 3: Process for manufacturing a precipitate growth inhibiting high strength, high conductivity copper alloy with precipitated particle size of no more than 0.5㎛, which involves producing through melting and casting an ingot that consists mainly of copper and unavoidable impurities plus 0.5 to 4.0 weight percent of nickel (Ni), 0.1 to 1.0 weight percent of silicon (Si) and 0.05 to 0.8 weight percent of tin (Sn), cold-rolling[1] the ingot after face milling, cold-rolling it again after precipitation treatment[2] for 5 to 12 hours at 450 to 502℃, and then tension-annealing it for no more than 90 seconds at 350 to 550℃

3) As to the patent at issue, the defendant completed the transfer of all rights consequential to spin-off on October 22, 2008.

C. Exploitation of Employee Invention at Issue

The defendant et al. have exploited Claim 1 employee invention at issue to produce PMC26, a copper alloy product consisting of copper, nickel, silicon, and tin. According to the catalog for the PMC26

1) Process of pressing a copper alloy coil through a roller at room temperature to spread it thinly

2) Precipitation refers to a phenomenon in which the tissue component is separated from a solid solution (solid mixture in which alloy elements are uniformly mixed), and a manufacturing process to induce precipitation is referred to as precipitation treatment.

product published by Poongsan Holdings in July 1999 (Plaintiff's Exhibit 35), nickel (Ni), silicon (Si), and tin (Sn) account for 2.0%, 0.4%, and 0.4% respectively, and the remainder is accounted for by copper (Cu).

【Factual Basis】 Undisputed facts, statements in Plaintiff's Exhibit 1, 2, 35, and 47, and Defendant's Exhibit 2, 8, 9, and 35 (including multi-level numbers), and purport of the overall argument

2. Occurrence of Obligation to Pay Compensation

A. Obligation to Pay Compensation

On comprehensive consideration of the above factual basis, as the employee invention at issue can be regarded as an invention related to the plaintiff's job in the scope of Poongsan Holdings' businesses during the plaintiff's service as an employee, and the plaintiff transferred his right to obtain a patent on his invention to Poongsan Holdings, Poongsan Holdings is obligated to pay compensation to the plaintiff pursuant to Article 40(1)[3] of the old Patent Act (prior to amendment to Regulation No. 6411 on February 3, 2001; the same shall apply hereinafter).

Moreover, as the defendant who is spun off from Poongsan Holdings is jointly responsible for the liabilities of the mother company established before spin-off (Article 530-9(1) of the Commercial Act), barring special circumstances the defendant shall be obligated to jointly pay a compensation for employee invention as to the patented invention at issue to the plaintiff.

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3) An employee or executive of a corporation or public official shall have a right to be fairly compensated if he or she transfers his or her patent or a right to obtain a patent for an employee invention according to a written agreement or job regulations, or sets an exclusive license.

B. Defendant's Arguments and Discussion

1) Defendant's Arguments

As the employee invention at issue is such whose novelty is denied because said invention is practically identical to the prior art (Defendant's Exhibit 10) or is such whose inventive step is denied because said technology can be easily invented by a person having ordinary skills in the pertinent art (hereinafter referred to as 'person having ordinary skills in the art'), the defendant has not gained any exclusive profits from the employee invention at issue, so the defendant is not obligated to pay any compensation for the employee invention to the plaintiff.

2) Legal Principles Needed for Discussion

Article 40(2) of the old Patent Act specifies the need to consider the degree of contribution by the employer and employee(s) to the completion of the invention and the amount of profits that the employer will gain from the invention when determining a fair amount of compensation to be awarded to the inventor-employee who has succeeded his or her invention to the employer. Also, Article 39(1) of the Act specifies that the employer has a royalty-free, non-exclusive license for the patent even if the employer does not succeed to the employee invention. Therefore, the aforementioned "profits that the employer will gain" refers to profits that can be gained by acquiring a position to exclusively exploit employee invention beyond a non-exclusive license. Meanwhile, unless there is a reason for patent invalidation, such as in the case where a patent-registered employee invention to which the employer has succeeded from the employee is a publicly known technology, or where said patented technology can be easily invented by a person having ordinary skills in the art using publicly known technologies, and the employer is deemed to gain practically no exclusive profit from the patent as a competing third

party can easily know such circumstances, it shall not be allowed to avoid the obligation to pay the compensation for employee invention by indiscriminately denying the exclusive profits from the patent based only on the fact that a possible reason for patent invalidation exists, and such patent invalidation reason may be taken into account as an element of consideration when calculating the exclusive profits from the patent (refer to Supreme Court Decision 2014Da220347 rendered on January 25, 2017).

3) Whether the Novelty and Inventive Step of Claim 1 Employee Invention at Issue is Denied

A) Comparison of Claim 1 Employee Invention at Issue to Prior Art

Element	Claim 1 employee invention at issue	Prior art (Defendant's Exhibit 10)
1.	Nickel (Ni) of 0.5 to 4.0 weight percent Silicon (Si) of 0.1 to 1.0 weight percent Tin (Sn) of 0.05 to 0.8 weight percent	Nickel (Ni) of more than 1.0 to 3.0 weight percent Silicon (Si) of 0.08 to less than 0.8 weight percent Tin (Sn) of 0.1 to 0.8 weight percent
2.	The remaining part is comprised of copper (Cu) and unavoidable impurities	Zinc (Zn) of 0.1 to 3 percent, iron (Fe) of 0.007 to 0.25 percent, Phosphorus (P) of 0.001 to 0.2 percent, Copper alloy in which the remaining part is comprised of copper (Cu) and unavoidable impurities
3.	Precipitated particle size is no more than 0.5㎛	

B) Commonalities and Differences between the Inventions

As shown in Paragraph 1) above, Element 1 has the same components as the prior art and has a common numerical range of composition ratio for each component.

However, the prior art contains zinc (Zn) of 0.1 to 3 percent, iron (Fe) of 0.007 to 0.25 percent, and phosphorus (P) of 0.001 to 0.2% which are not explicitly contained in Element 2 (hereinafter referred to as 'Difference 1'). In addition, the prior art has no limit in precipitated particle size as in Element 3 (hereinafter referred to as 'Difference 2').

C) Easy Inventability

Through a comprehensive consideration of the circumstances shown below, unless determined in hindsight on the premise that the content disclosed in the specifications for the employee invention at issue is already known, it is hard to see that a person having ordinary skills in the art can easily invent Claim 1 employee invention at issue from prior art.

(1) Disclosure or Implication from Prior Art

Claim 1 employee invention at issue has its technical significance in producing a conductive copper alloy that has outstanding mechanical and physical properties such as flame resistance, high strength, and high conductivity, even if solution heat treatment[4] is skipped, by adding 0.05 to 0.8 weight percent of tin (Sn) to Cu-Ni-Si-based alloy[5]

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4) Solution refers to a phenomenon in which a metal changes into a solid state. Partial solution occurs naturally in the hot rolling process while manufacturing copper alloy, but triggering an additional solution through heat treatment at a high temperature will deliver better properties in the precipitation treatment process which takes place afterwards, producing materials with improved machinability, which is called solution heat treatment.

5) A kind of copper alloy, which is developed by US-based Corson and is comprised of Cu, Ni, and Si. It is also called Corson alloy, but will be referred to as Cu-Ni-Si-based alloy hereinafter.

to restrain the generation and growth of precipitate and finely disperse precipitate (the size of precipitated particle is limited in Element 3).

However, as the addition of tin (Sn) to Cu-Ni-Si-based alloy in the prior art was intended to improve the springiness and bendability of Cu-Ni-Si-based alloy, it is hard to consider that the prior art discloses or implies the technical concept of Claim 1 employee invention at issue which is intended to improve the mechanical and physical properties of copper alloy such as flame resistance by adding tin (Sn) to Cu-Ni-Si-based alloy to restrain the generation and growth of precipitate and that a person having ordinary skills in the art can easily recognize said technical concept from the prior art.

(2) Predictability of Effect

Moreover, as shown in the table below, Claim 1 employee invention at issue shows an effect of delivering better mechanical properties such as tensile strength and spring strength compared to the prior art (figures in parentheses are median values). In addition, the aforementioned employee invention produces a flame resistance that maintains over 80% of initial tensile strength up to about 500℃. As stated above, Claim 1 employee invention at issue, which not only adds tin (Sn) but also limits the size of precipitated particles in Element 3, should be deemed as a new discovery of a specific property of the copper alloy that has not been recognized in the prior art, and cannot be diminished as an invention that only produces effects which are predictable from the prior art.

	Tensile strength (TS)	Elongation (EL)	Hardness (HV)	Electrical conductivity (EC)	Spring strength (Kb)
Claim 1 employee invention at issue	60~77(68.5)	7~10	175~250	40~57(48.5)	40~62(51)
Prior art	56.1~61.5(58.8)	7~9	X	37~53(45)	38~46(42)

Therefore, Claim 1 employee invention at issue produces effects that are not predictable from the prior art.

(3) Ease of Composition Change

The prior art contains zinc (Zn), phosphorus (P) and iron (Fe) in addition to tin (Zn). However, given the specifications of the prior art stated below, said components appear to be essential to resolve challenges of the prior art or produce the intended property of alloy from the prior art, and thus omitting such components may damage the original technical significance of the prior art. Consequently, it appears to be difficult for a person having ordinary skills in the art to arrive at Claim 1 employee invention at issue easily.

(c) Zn
Although the Zn component improves the heat peeling resistance and mobility resistance of solder, the content has been determined to be in a range from 0.1 to 3% as such desired effect is not produced if the content is less than 0.1%, and solderability is damaged if the content exceeds 3%.

(d) Fe
Although the Fe component can not only improve the hot rolling property but enhance the plating heating adhesion by miniaturizing Ni-Si compound precipitation, which will improve the reliability of the connector, the content has been determined to be in a range from 0.007 to 0.25%, as such effect is not produced if the content is less than 0.007 and the heat rolling property deteriorates and conductivity is adversely affected if the content exceeds 0.25%.

(e) P
Although the P component restrains the deterioration of springiness resulting from the bending process and improves the insertability of a molded connector and mobility resistance, the content has been determined to be in a range from 0.001 to 0.2%, as such desired effects are not produced if the content is less than 0.001% and the heat peeling resistance is significantly deteriorated if the content exceeds 0.2%.

Meanwhile, as the specifications of Claim 1 employee invention at

issue state that “Zn can be added up to 1 weight percent and P, Mg and Zr can be added up to 0.1 weight percent as a deoxidizer during the refining process (omitted)...In addition, during composition, Ni can be substituted with Fe or Co of up to 1 weight percent,” thus zinc (Zn), phosphorus (P), and iron (Fe), which are the same components used in the prior art, can be added to the employee invention at issue. However, given that components other than nickel (Ni), silicon (Si), tin (Sn), and copper (Cu) are referenced as unavoidable impurities in Element 2 and the fact that a small amount of deoxidizer added in the process of melting casting to remove oxygen in the melted metal in order to prevent bubble defect combines with oxygen and is transformed into an oxide and almost does not remain in the metal at all, which is regarded as a technological common sense, it is hard to see that zinc (Zn) and phosphorus (P) components in Claim 1 employee invention at issue have the same technical significance as those components in the prior art.

Consequently, it is hard to see that the zinc (Zn) and phosphorus (P)-related composition in the prior art is practically identical to the composition in Claim 1 employee invention at issue, and it is also hard to see that removing zinc (Zn), phosphorus (P) and iron (Fe) components from the prior art by a person having ordinary skills in the art without any specific motive can easily lead to Element 2.

D) Summary

Therefore, the inventive step of Claim 1 employee invention at issue is not denied by the prior art.

In addition, on comprehensive consideration of circumstances set forth in Paragraph C) above, it is hard to see that Differences 1 and 2 are just an addition, deletion and modification of well-known and commonly used art in the specific means for resolving challenges and just subtle differences that are not sufficient to produce a new effect, which implies that both inventions cannot be deemed to be practically identical. Therefore, the novelty of Claim 1 employee invention at

issue is not denied by the prior art.

4) Whether the novelty and/or inventive step of Claim 3 employee invention at issue is Denied

As Claim 3 employee invention at issue contains all the technical features of Claim 1 employee invention at issue, it can be said that the novelty and inventive step of Claim 3 employee invention at issue are not denied by the prior art unless the novelty and inventive step of Claim 1 employee invention at issue are denied by the prior art, as shown in Paragraph 3) above.

5) Summary

Therefore, it is difficult to say that there is any reason for invalidation as in the case that the employee invention at issue is such that is identical to publicly known technologies or can be easily invented by a person having ordinary skills in the art using publicly known technologies. Even if there is a reason for which the inventive step of the employee invention at issue is denied by the prior art, it is hard to find any evidence which demonstrates that the employer has gained practically no exclusive profit from the patent as a competing third party can easily access and know such circumstances.

Therefore, the defendant's argument that the defendant et all. are not obligated to pay the compensation for employee invention to the plaintiff because the defendant has gained no exclusive profit from the said invention on the other premise cannot be accepted.

3. Calculation of Fair Amount of Compensation

2. Summary of Plaintiff's Arguments

As the fair amount of compensation that the defendant is obligated

to pay the plaintiff is calculated to be KRW 8,616,882,316 (KRW 689,350,585,341 of revenue × contribution rate of exclusive rights of 50% × royalty rate of 10% × inventor's contribution rate of 50% × plaintiff's contribution rate of 50%), the plaintiff claims KRW 5,000,000,000 as splitting of claims plus damages for delay in payment of said amount.

B. Calculation Criteria

1) Given that Article 40(2) of the old Patent Act specifies that "When determining the amount of compensation, the amount of profits that the employer will gain from the invention and the degree of the employer's contribution to the completion of said invention shall be taken into account. In addition, where the employee et al. presents a legitimate method for determination, such method shall be taken into account," what should be generally taken into account for calculating the amount of compensation for the employee invention pursuant to the regulation stated above should be ① profits that the employer will gain, ② employer's contribution rate, and ③ inventor's contribution rate.

   In this regard, ① 'profits that the employer will gain' refers to the profits which are subject to distribution between the employer and the employee, and are limited to the profits for which there are a significant causal relationship with the patent. ② 'Employer's contribution rate' refers to the degree of contribution of what the employer has provided for completing the invention such as research and development expenses, research facilities, material expenses, salaries, etc. ③ 'Inventor's contribution rate' refers to the degree of the employee's efforts committed to completing the invention, which also means the degree of contribution by the plaintiff

among the co-inventors.

2) However, as the employer has a royalty-free, non-exclusive license on the patent even if he does not succeed to the employee invention from the employee, ‘profits that the employer will gain’ means the profits that the employer can gain by obtaining a position to exclusively exploit the employee invention, beyond the non-exclusive license. However, the ‘profits that the employer will gain’ means the profits generated from the employee invention itself, but does not mean accounting profits such as remaining operating incomes net of profits and expenses, which means that the employer should be deemed to have gained profits if there are any profits generated from the employee invention itself regardless of the accounting profits. In addition, even though the products that the employer is manufacturing and selling are not included in the scope of rights for the invention, if those products are such that can substitute the demand for the employee invention-applied products and the revenue of the company has increased by exploiting the patent right on the employee invention to prevent a competitor from exploiting the employee invention of the same kind, such profits can be regarded as the employer's profits originating from the employee invention (refer to Supreme Court Decision 2009Da75178 rendered on July 28, 2011).

3) On the other hand, in the event that only the employer exploits the employee invention and does not allow a third party to exploit it, the method to calculate the ‘profits that the employer will gain’ would be (i) calculation based on the amount equivalent to the expected royalty on the presumption that the employer allows a third party to exploit the employee invention, or (ii) calculation based on the revenue surplus compared to the reduced revenue expected if the employer allows a third party to exploit the employee invention.

The profits that the employer, or the defendant et al., will gain from the initial exploitation of the employee invention at issue to the expiration date of said patent shall be herein calculated according to the method that the plaintiff demands, specifically by multiplying the employer's revenue by a hypothetical royalty rate net of an amount subject to the exploitation of non-royalty license; in other words, a method of multiplying the exclusive right contribution rate.

Amount of compensation = ① Amount of profits that the defendant et al. has gained from the employee invention at issue (defendant's revenue × royalty rate × exclusive right contribution rate) × ② Employee's (inventors') contribution rate (1 - employer's contribution rate) × ③ Plaintiff's contribution rate among co-inventors

4) However, as it is difficult to reach acknowledgment through strict and thorough verification on various factors set forth above, an appropriate amount should be determined based on the purport of the overall argument and the results of an investigation of the evidence.

C. Detailed Process of Calculating the Amount of Compensation

1) Amount of profits that the defendant et al. has gained from the employee invention at issue.

A) Sales of defendant's products to which the employee invention at issue is applied

On comprehensive consideration of statements in Plaintiff's Exhibit 47, Defendant's Exhibit 35 and 53 as well as the purport of the overall argument, the sales of PMC26 product by the defendant for a period from 1998 to 2015 have totaled KRW 689,350,585,341 as stated below (there is no particular dispute on this between the parties).

Classification		Sales volume (tons)	Revenue (KRW)	Classification		Sales volume (tons)	Revenue (KRW)
1998	Bare	18.	91,000,000.	1999	Bare	60	273,000,000
	Plated	69	403,000,000		Plated	261	1,238,000,000
	Total	87	494,000,000		Total	321	1,511,000,000
2000	Bare	64	301,000,000	2001	Bare	63	297,000,000
	Plated	518	2,647,000,000		Plated	849	4,360,000,000
	Total	582	2,948,000,000		Total	912	4,657,000,000
2002	Bare	126	562,000,000	2003	Bare	222	1,060,000,000
	Plated	1,248	6,352,000,000		Plated	1,359	7,139,000,000
	Total	1,374	6,914,000,000		Total	1,581	8,199,000,000
2004	Bare	232	1,391,000,000	2005	Bare	274	1,777,000,000
	Plated	1,848	12,423,000,000		Plated	2,644	18,872,000,000
	Total	2,080	13,814,000,000		Total	2,918	20,649,000,000
2006	Bare	312	2,820,000,000	2007	Bare	387	3,729,000,000
	Plated	2,999	29,342,000,000		Plated	3,646	36,995,000,000
	Total	3,311	32,162,000,000		Total	4,033	40,724,000,000
2008	Bare	340	3,560,000,000	2009	Bare	314	3,006,000,000
	Plated	3,229	33,896,000,000		Plated	3,129	28,615,000,000
	Total	3,569	37,456,000,000		Total	3,443	31,621,000,000
2010	Bare	728	7,837,000,000	2011	Bare	837	9,908,000,000
	Plated	5,201	48,601,000,000		Plated	6,614	69,985,000,000
	Total	5,929	56,438,000,000		Total	7,451	79,893,000,000
2012	Bare	752	7,543,000,000	2013	Bare	963	8,469,000,000
	Plated	7,168	71,915,000,000		Plated	8,652	81,124,000,000
	Total	7,920	79,458,000,000		Total	9,615	89,593,000,000
2014	Bare	1,080	9,282,000,000	2015	Bare	1,000	8,226,051,095
	Plated	8,932	76,358,000,000		Plated	10,355	88,953,534,246
	Total	10,012	85,640,000,000		Total	11,355	97,179,585,341
Total	Bare	7,772	70,132,051,095				
	Plated	68,721	619,218,534,246				
	Total	76,493	689,350,585,341				

B) Hypothetical Royalty Rate

(1) Detailed Calculation

As shown in Paragraph 2-B above, the technical significance of the

employee invention at issue lies in its method of production of a conductive copper alloy with outstanding mechanical and physical properties even without solution heat treatment by restraining the generation and growth of precipitate to finely disperse it. Given that the defendant et al. came to produce PMC26, an automotive connector, using the employee invention having such technical significance, and has achieved a surge in sales sufficient to substitute competitive overseas products [Clause A above], it can be said that the employee invention at issue has delivered technical innovation of a significant level.

However, it is also obvious that competitors have been manufacturing and selling products having similar components and composition ratio to Claim 1 employee invention at issue (Defendant's Exhibit 11, 12, and 45) and that the optimization of detailed processes as well as manufacturing expertise is necessary to produce products that are competitive in terms of yield and/or product quality even when using a manufacturing process to Claim 3 employee invention at issue is applied (it appears to be obvious that the defendant et al. has secured its competitiveness through years of optimization of detailed processes).

Given the relevant circumstances as described above, such as the degree of technical innovation originating from the employee invention at issue, improved effects, objective technical value, exploitability and profitability, the proper hypothetical royalty rate for the employee invention at issue appears to be around 2%.

(2) Defendant's Arguments and Discussion

(A) Defendant's Arguments

PMX Industries, Inc (hereinafter PMX), the defendant's US corporation, has entered into a license agreement with Mitsubishi Shindoh Co., Ltd. for manufacture and sale of MAX251C in the Americas and agreed to pay a royalty (JPY 20,000,000 + JPY 8 per kg of production) (Plaintiff's Exhibit 45). When calculating the royalty for about 76,000 tons of PMC26 product manufactured and sold from 1998 to 2015 according to the above calculation formula, the amount of royalty

calculated turns out to account for about 0.91% of the total revenue. As said royalty is calculated on the premise of transfer of manufacturing technologies, the hypothetical royalty should be lower than said royalty.

(B) Decision

Given that no royalty has been paid from PMX to Mitsubishi Shindoh Co., Ltd. as production pursuant to said agreement has never been carried out, as was argued by the defendant, it doesn't seem to be reasonable to apply a formula for royalty based on the premise of exploiting a patent in an overseas country, where no royalty has been paid due to there being no production, to this case that involves a large scale of sales equivalent to about KRW 689 billion, and it seems even more unreasonable when considering the circumstances mentioned above.

Therefore, it is not sufficient to overturn the decision on acknowledgment of hypothetical royalty set forth in Paragraph (1) above only with the statement in Pliantiff's Exhibit 45.

C) Exclusive Right Contribution Rate

(1) Exploitation of Employee Invention at Issue

There is no dispute between the parties with regard to the fact that the defendant has manufactured and sold PMC26 product, exploiting Claim 1 employee invention at issue. Meanwhile, the defendant et al. has modified the manufacturing procedures several times while in the process of manufacturing PMC26 product (Plaintiff's Exhibit 6, 9, 28 and 35 and Defendant's Exhibit 38-1) and has changed the sequence of the process to differ from Claim 3 employee invention at issue, even adding a solution heat treatment process which is not included in the claims set forth herein. However, even if the production process of PMC26 is not included in the scope of rights on Claim 3 employee invention at issue, it can be deemed that at least the PMC26 product can substitute the demand for other products which use the production process to which Claim 3 employee invention at issue is applied and

the employer has exploited the patent right on Claim 3 employee invention at issue to prevent competitors from exploiting said employee invention, resulting in a surge in the defendant's sales. Therefore, the profits originating therefrom can be deemed as such that the employer has gained from the exploitation of said employee invention.

However, as it is difficult to separate the profits originating from Claim 1 employee invention at issue from those originating from Claim 3 employee invention at issue, because both profits originated from the manufacture and sale of the same product, a single exclusive right contribution rate should be determined in consideration of the aforementioned circumstances.

(2) Detailed process of calculating exclusive right contribution rate

(A) The circumstances listed below are factors that increase the exclusive right contribution rate.

i) As shown in Clause B) above, it can be said that the employee invention at issue has delivered a significant level of technical innovation.

ii) The defendant has achieved about KRW 689 billion in sales through the exploitation of the employee invention at issue.

(B) The circumstances listed below are factors that limit the increase of the exclusive right contribution rate.

i) Other competitors have been manufacturing and selling products having similar components and composition ratio to Claim 1 employee invention at issue (Defendant's Exhibit 11, 12, and 45).

ii) Even when using the manufacturing process which is based on Claim 3 employee invention at issue, it is obvious that manufacturing expertise and optimization of specific processes are necessary to produce competitive products in terms of yield and product quality. It appears to be obvious that the defendant et al. has secured its competitiveness through years of optimization of detailed processes (Defendant's Exhibit 17, 24, and 44).

iii) The defendant has modified the manufacturing procedures several times while in the process of manufacturing PMC26 product (Plaintiff's Exhibit 6, 9, 28, and 35 and Defendant's Exhibit 38-1) and has changed the process sequence to differ from Claim 3 employee invention at issue or even added a solution heat treatment process which is not included in the claims set forth herein.

iv) It is deemed that not only the technical features of the employee invention at issue but also the defendant's status in the market, reputation, sales network, brand awareness, customer attraction, and promotional and marketing activities have significantly contributed to the surge in sales. In particular, given that the exclusive right contribution rate should be calculated based on the sales surplus identified through a comparison with presumed sales in a given situation in which the employer exploits the employee invention based on a royalty-free, non-exclusive license on it, it is obvious by experience that the contribution of the defendant et al. who have an exclusive status in the relevant market would be significant (however, specific circumstances should be also taken into account; for example, the defendant's market share in the copper rolling market as of 2016 was 48% (Defendant's Exhibit 45)).

(C) Summary

Through a comprehensive consideration of the circumstances mentioned above, the exclusive right contribution rate for the employee invention at issue should be around 15%.

D) Summary: Calculation of the Amount of Profits that the Defendant Will Gain

Therefore, the amount of profits that the defendant et al. will gain from the employee invention at issue is calculated to be KRW 2,068,051,756 (= Defendant's product sales of KRW 689,350,585,341 × hypothetical royalty rate of 2% × exclusive right contribution rate of

15%; amounts less than KRW 1 are rounded down).

2) Employee's (inventors') contribution

A) The circumstances listed below are factors that increase the employee's contribution.

i) The plaintiff, who joined Poongsan Holdings after obtaining a doctorate degree in metal engineering, came to accomplish the employee invention at issue while performing research and development activities as the director of the materials development office, and such employee invention at issue was accomplished through continuous experiments and research efforts based on the plaintiff's expertise and experience in copper alloy, as a researcher capable of performing independent research activities.

ii) It appears to be true that the plaintiff played a leading role in selecting the research subject(s) related to the employee invention at issue.

B) The circumstances listed below are factors that limit the increase of the employee's contribution.

i) Given that the defendant et al. have been developing technologies for Cu-Ni-Si-based copper alloy such as PMC102 or 102M before the completion of the employee invention at issue and the manufacturing process of PMC26 is significantly similar to that of PMC102 (Plaintiff's Exhibit 8-2), such accumulated technologies belonging to the defendant et al. appear to have had a significant influence on the completion of the employee invention at issue.

ii) Repetitive experiments and evaluations seem to be necessary to complete the employee invention at issue, and it is obvious by experience that human and material resources belonging to the defendant had been committed in the process of employee invention. In particular, it seems obvious that highly expensive equipment was necessary to perform such experiments and evaluation due to the nature of such technical sector.

C) Summary

On comprehensive consideration of the circumstances mentioned above, the employee's contribution to the employee invention at issue should be around 25%.

3) Plaintiff's Contribution Rate

As the plaintiff et al. have jointly completed the employee invention at issue, it would be reasonable to set the plaintiff's contribution rate to 50%.

4) Summary: Calculation of the Amount of Compensation for Employee Invention

Therefore, the fair amount of compensation for the plaintiff's employee invention is calculated to be KRW 258,506,469 (= amount of profits gained by the defendant et al. of KRW 2,068,051,756 × employee's (inventors') contribution rate of 25% × plaintiff's contribution rate of 50%; amounts less than KRW 1 are rounded down).

If this is so, barring any special circumstances, the defendant is obligated to pay the plaintiff KRW 257,006,469 (= 258,506,469 - 1,500,000) plus damage for delay in payment, subtracting KRW 1,500,000 that was previously paid from Poongsan Holdings to the plaintiff as a compensation for employee invention, which is also acknowledged by the plaintiff, from KRW 258,506,469.

4. Discussion on the Defendant's Arguments with regard to Extinctive Prescription

As the opinion that is to be stated herein by the Court is the same as what is stated in Paragraph 5 of the OPINION Section of the lower court's decision, such statement shall be granted pursuant to Article 420 of the Civil Procedure Act.

5. Conclusion

A. Therefore, the defendant is obligated to pay the plaintiff **KRW 257,006,469** plus; ① interest at the legal rate of 5% per annum, as specified by the Civil Act, for the amount of **KRW 32,967,529** granted by the lower court among the aforementioned amount from January 10, 2013, the day following delivery of the complaint as demanded by the plaintiff, to July 6, 2016, the date of court decision on which it was acknowledged that the defendant's resistance against the existence or scope of its obligations was significant, and interest at the legal rate of 15% per annum, specified by the Act on Special Cases Concerning Expedition, Etc. of Legal Proceedings, for the same amount from July 7, 2016 until it has been paid in full; ② interest at the aforementioned legal rate of 5% per annum for **KRW 17,532,471** additionally granted by this court (KRW 50,500,000 claimed in the lower court - KRW 32,967,529 granted by the lower court) from January 10, 2013, the day following delivery of the complaint as demanded by the plaintiff, to November 30, 2017, the date of court decision on which it was acknowledged that the defendant's resistance against the existence or scope of its obligations was significant, and interest at the aforementioned legal rate of 15% per annum for the same amount from December 1, 2017 until it has been paid in full; ③ interest at the aforementioned legal rate of 5% for the remaining **KRW 206,506,469** (257,006,469 - 32,967,625 granted by the lower court - 17,532,471) from November 4, 2016, the day following delivery of the application for amendment to plaintiff's demand and cause of action dated November 1, 2016, to November 30, 2017, the date of the court decision on which it was acknowledged that the defendant's resistance against the existence or scope of its obligations was significant, and interest at the aforementioned legal rate of 15% per annum for the same amount from December 1, 2017 until it has been paid in full.

B. The plaintiff's petition for this case is well grounded and

therefore shall be granted. The plaintiff's other petitions are without merit and are therefore dismissed. As the lower court's decision that are partially NOT consistent with the decision herein is erred, the plaintiff's petition expanded in this court shall be partially granted and therefore, the lower court's decision shall be amended as stated in Paragraph 1 of the ORDER herein.

Presiding	Judge	Hwansu KIM
	Judge	Jutak YOON
	Judge	Hyeonjin JANG

PATENT COURT OF KOREA
FIRST DIVISION
DECISION

Case No.: 2016Heo9035 Rejection (patent)

Plaintiff: Glaxo Group Limited
United Kingdom

Defendant: Commissioner of the Korean Intellectual Property Office

Date of Final Trial: November 14, 2017

Decision Date: December 21, 2017

ORDER

1. The IPTAB Decision on Case 2014Won5801 shall be revoked.
2. The cost arising from this litigation shall be borne by the Defendant.

PLAINTIFF'S DEMAND

As ordered.

OPINION

1. Background

A. Patented Invention at Issue

1) Title: Manufacturing process of 9-cis-retinoic acid

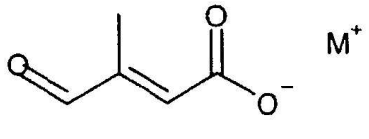
2) International Filing Date / Date of Claimed Priority / Date of Registration / Registration Number: April 2, 2004 / April 11, 2003 / July 20, 2007 / 10-0743278

3) Patent Holder: Plaintiff

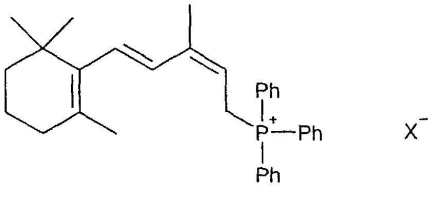
4) Claims

Manufacturing process of 9-(Z)-retinoic acid which is characterized by reacting alkali metal salt of 3-methyl-4-oxocrotonic acid in Chemical Formula I below with (Z) -isomer of C15- triphenylphosphonium salt in Chemical Formula II below in the presence of a base, and being generated through the hydrolysis of alkali metal salt of 3-methyl-4-oxocrotonic acid in Chemical Formula I above from alkyl-3-methyl-4-oxocrotonate when alkali hydroxide exists in the same reaction system;

Chemical Formula I



Chemical Formula II



In the formulas above,
M is sodium or potassium,
X is halogen.

【Claims 2, 11, and 12】 deleted.

【Claims 3 through 10】 Refer to the Appendix.

B. Item Permission for Manufacture and Sale of Drugs

1) Date of permission: April 15, 2013

2) Permission details: Permission on drug import items pursuant to Article 42 of the Pharmaceutical Affairs Act (hereinafter referred to as 'item permission of at issue').

3) Active ingredient: 9-cis retinoic acid

4) Title of item: Alitretinoin

5) Title of product: Alitoc soft capsule 10mg (hereinafter referred to as 'drug at issue')

6) Efficacy and effectiveness: treatment and relief of recurrent chronic severe adult hand eczema that does not respond to strong topical steroid therapy for at least 4 weeks

C. Application for Term Extension of Patented Invention at Issue and Rejection

1) The plaintiff filed an application to register the patent term extension in which Claims 1, 3 or 10 of the patented invention at issue (hereinafter referred to as 'extendable patented invention at issue') are designated as 'Claims for extension' (application No. 10-2013-0083123; hereinafter referred to as 'application for extension at issue).

2) Upon the application for extension at issue, the examiner at the Korean Intellectual Property Office (the "KIPO") submitted a written argument on November 12, 2013 for the reason "The patented invention at issue cannot be deemed eligible for application for patent term extension because the drug at issue cannot be regarded as the first drug to be granted item permission based on a new substance as an active ingredient,

since permission had already been granted to Bessanoid Soft Capsule, Stieva-A Liquid, and Retacnyl Cream which have the same main ingrendient (Tretinoin[1]) before the said petented invention at issue was granted an item permission. In addition, the term applied for extension exceeds the term in which the patented invention at issue cannot be exploited."

3) On the other hand, on April 14, 2014 when submitting an amendment to correct the term of registered extension to 457 days, the plaintiff submitted a written argument purporting that "Alitretinoin, which is an active ingredient of the drug of at issue, should be accepted as a new substance because the chemical structure of the active portion where the medicinal effect is generated is completely new when compared with Tretinoin."

4) On August 18, 2014, the examiner at the KIPO rejected the aforementioned argument by the plaintiff, giving the following reason: "The reason for rejection stated in the written argument notified is not resolved because the drug at issue is not eligible for application for patent term extension, since the drug at issue does not correspond to the definition of a new

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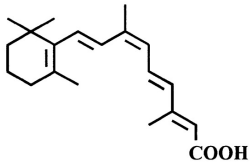
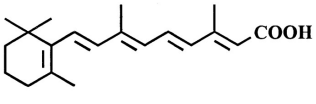
1) All-transretinoic acid, which is the active ingredient of Tretinoin, is in a geometric isomer relationship with 9-cis-retinoic acid (item name: alitretinoin), which is an active ingredient of the drug at issue (for more information, refer to Paragraph 3-B below).

Item name (active ingredient)	Alitretinoin (9-cis retinoic acid)	Tretinoin (all-transretinoic acid)
Chemical structure	 9-cis-RA	 all-trans-RA

drug as set forth in subparagraph 8 of Article 2 of the Pharmaceutical Affairs Act."

D. IPTAB Decision

1) On September 17, 2014, the plaintiff filed an appeal against the above rejection to the Intellectual Property Trial and Appeal Board 2014WON5801.

2) On September 23, 2016, the Intellectual Property Trial and Appeal Board made an administrative decision to dismiss the plaintiff's petition for trial for the following reasons.

The drug at issue contains Alitretinoin as an active ingredient and was granted permission on April 15, 2013, but permission had already been granted to other drugs such as Bessanoid Soft Capsule containing Tretinoin even before the drug at issue was granted the permission.
Given that Alitretinoin is '9-cis retinoic acid' and Tretinoin is 'all-transretinoic acid', which means that Alitretinoin and Tretinoin are in a geometric isomer relationship and both substances have a common property of combining with RAR as they contain a rotation-free single bond, it is hard to say that the chemical structure of the active portion in Alitretinoin producing its medicinal effect is different from that in Tretinoin.
In addition, as retinoic acid is a metabolite of Vitamin A, exists in a human body as an isomer of all-trans, 13-cis or 9-cis retinoic acid, and each of the isomers is inter-converted, it can be said that the chemical structure of the active portion in 9-cis retinoic acid producing its medicinal effect is identical to that of all-transretinoic acid.
Even through the review on matters related to permission from the Ministry of Food and Drug Safety (hereinafter referred to as MFDS), it has been confirmed that not only the drug at issue but all isomers of retinoic acid have not been permitted as new drugs, which implies that retinoic acid was not accepted as a new substance in the MFDS' permission process because retinoic acid is a substance existing in a living body as a metabolite of Vitamin A.
Furthermore, as it has been widely known that all-transretinoic acid is

isomerized into 9-cis retinoic acid in a living body, and all-transretinoic acid had been on sale in the market as a permitted drug product for a long time at the time when permission was granted to the drug at issue, it is hard to say that the unexploitable period of patented invention was unreasonably reduced compared to general inventions, as it took so long to be granted permission for Alitoc.
Therefore, as it is not accepted that the chemical structure of the active portion producing medicinal effects involves a new substance as an active ingredient, it should be deemed that the patented invention at issue is not eligible for application for patent term extension as set forth in Article 7 of the Enforcement Decree of the Patent Act.

E. Relevant Regulations

1) Old Patent Act (before the amendment to Regulation No. 12753 effective on June 11, 2014)
   - Article 89 (Patent term extension according to permission)
     ① Exploitation of a patented invention shall be preceded by permission or registration pursuant to other regulations. For an invention specified by a Presidential Decree for which a long period of time to complete tests on activity or safety is required for such permission or registration (hereinafter referred to as permission et al.), the term of such patent may be extended by a period equivalent to the unexploitable period up to a maximum of 5 years notwithstanding Article 88(1) of the Act (hereinafter referred to as delegation provision at issue).

2) Enforcement Decree of Patent Act (amended decree by Presidential Decree No. 24491 on April 3, 2013)[2)]
   - Article 7 (Invention eligible for application for patent term extension according to permission) "Invention specified by a Presidential Decree" as set forth in Article 89(1) of the Act can refer to any of the following:
     1. Invention of a drug [limited to a drug which contains a new

2) Pursuant to Article 2 of the Supplementary Provision ("Amended regulations

substance (refers to a substance in which the chemical structure of the active portion producing medicinal effects is new; the same shall apply hereinafter in this article) as an active ingredient, and which is the first to be granted item permission] that is required to be granted an item permission pursuant to Paragraphs 2 and 3 of Article 31 or Paragraph 1 of Article 42 of the Pharmaceutical Affairs Act (hereinafter referred to as Enforcement Decree provisions at issue); and

2. Invention of pesticide or raw substance that is required to be registered pursuant to Article 8(1); Article 16(1); and Article 17(1) of the Pesticide Control Act for the exploitation of a patented invention.

3) Old Pharmaceutical Affairs Act (before amendment to Regulation No. 11690 effective on March 23, 2013; hereinafter, the same shall apply)

■ Article 2 (Definitions) Terms used in this Act are definded as follows.

8. “New drug” refers to a drug made of a substance whose chemical structure or essential composition is completely new, or to a compound drug containing a new substance as an active ingredient, which is designated by the Minister of Food and Drug Safety.[3)]

■ Article 31 (Permission for manufacturing business, etc.)

① A person who intends to be engaged in the manufacture of drug(s) shall be equipped with required facilities according to facilities criteria specified by a Presidential Decree, and be granted permission from the Minister of Food and Drug Safety pursuant to a Decree of the Prime Minister.

⑪ For permission or notification of a business engaged in manufacture or consignment manufacture and sale of a drug, and an item for manufacture and sale pursuant to Paragraphs 1 through 4

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in Article 7 shall apply to the inventions which applied for registration of extension of patent term according to permission et al. after the enforcement of this decree.”), Article 7 of the above Enforcement Decree shall apply to applications for extension filed after the launch of said decree on April 3, 2013.

3) Hereinafter, referred to as a ‘new drug’.

and 9, required information regarding subject of notification, criteria, requirements and management shall be prescribed by a Decree of the Prime Minister.

- Article 42 (Permission for import of drugs)
  ① Person who intends to import drugs (hereinafter referred to as "importer") shall be granted permission from or notify the Minister of Food and Drug Safety of each item to import pursuant to a Decree of the Prime Minister. The same shall apply to the change to permission granted or information notified.
  ④ With regard to drugs imported pursuant to Paragraph 1 above or the importer thereof, Paragraphs 7, 10, and 11 of Article 31 shall apply. At this time, "manufacture" or "production" shall be regarded as "import" and "manufacture" or "person who is granted item permission" shall be regarded as "importer."
  ⑤ Required information regarding drugs subject to permission or notification, criteria, requirements, and management shall be prescribed by a Decree of the Prime Minister.

4) Regulations for Item Permission, Notification and Examination of Drugs (amended by Presidential Decree No. 24491 on April 3, 2013)

- Article 1 (Purpose) This notification is intended to specify details regarding applicable items, kinds of data, preparation skills, requirements, scope of exemption, criteria and management with regard to the permission or notification of manufacture or sale of drugs, permission or notification of drugs to be imported, safety and effectiveness of drugs and criteria thereof, and examination of test method pursuant to Articles 31, 35, 42, and 76 of the Pharmaceutical Affairs Act.
- Article 2 (Definitions) Terms used in these Regulations are defined as follows:
  1. "Active ingredient" refers to a substance or substance group (includes herbal medicine whose pharmacologically active ingredient has not been clearly discovered) as a main ingredient which is expected to produce, directly or indirectly, a medicinal effect for the drug through its intrinsic pharmacological action.
  7. "New drug" refers to a drug pursuant to Article 2(8) of the Pharmaceutical Affairs Act which is based on a new substance whose chemical structure or essential composition is totally new

and different from a drug that has already been domestically approved, or a compound drug containing said new substance as an active ingredient, which is specified in Section I of Annexed Table 1 describing the kinds of drugs and the scope of data to be submitted. However, items listed in an official compendium or formulary that is approved by the Minister of Food and Drug Safety pursuant to the Korean Pharmacopoeia or Annexed Table 1-2 are excluded.

8. "Drugs subject to the submission of safety and effectiveness examination data (hereinafter referred to as "drugs subject to data submission")" refer to a drug other than a new drug, which requires a safety and effectiveness examination pursuant to this regulation, which is listed in Section II of Annexed Table 1[4] describing the kinds of drugs and the scope of data to be submitted.

[Factual Basis] Undisputed facts, statements in Plaintiff's Exhibit 1, 4 or 6, and Defendant's Exhibit 1, 2 or 13, and purport of the overall argument

2. Arguments of the Parties

A. Summary of Plaintiff's Arguments

For the following reasons, the IPTAB decision on this case which maintains the rejection of the application for extension in this case is in error and should be revoked.

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4) Annexed Table 1 prescribes "drug containing new salt as an active ingredient", "drug containing new isomer as an active ingredient", "drug of new medicinal effect group", "new composition of active ingredient or increase/decrease of content only", "drug with new administration route", "drug with new usage and dosage", "new formulation (with the same administration route)" as drugs subject to data submission.

1) The purport of the amendment to the provisions of the enforcement decree at issue is to separately specify inventions eligible for application for registration of extension in the Patent Act's own system; for example, rejecting the extension of patent term of a drug “containing an active ingredient” whose activity and safety has been demonstrated by the existing permission, which “only changes its use, formation or treatment target for follow-up permission,” but not rejecting the extension of patent term of a drug based on a new isomer whose activity or safety has not been demonstrated by the existing permission, nor to limit the scope of inventions eligible for extension of patent term to “new drug” inventions specified in the Pharmaceutical Affairs Act. Consequently, whether a drug, on which the application for registration of extension of patent term is based, contains a “new substance” as an active ingredient should be determined based on the definition of “new substance” set forth in the relevant enforcement decree at issue, rather than the definition of “new drug” set forth in Article 2(8) of the old Pharmaceutical Affairs Act.

2) However, Alitretinoin, the active ingredient of the drug at issue, which acts as a basis of the application for extension at issue, has a different chemical structure from Tretinoin, the active ingredient of an already approved product, shows a difference in the kind of binding receptor due to such structural difference, and delivers a different clinical efficacy. In addition, the drug at issue has been granted item permission through the submission of safety and effectiveness data required for permission, which were obtained through a total of 14 clinical trials that were different and separate from the clinical trials for the existing approved drugs.

3) Therefore, it is obvious that Alitretinoin is “a substance having

a new chemical structure for the active portion that produces a medicinal effect" specified in the enforcement decree at issue.

B. Summary of Defendant's Arguments

For the following reasons, the application for extension at issue should be rejected.

1) As the patent term extension system originated from the United States, a drug eligible for application for registration of extension of patent term should be deemed to be a drug that has been granted item permission as a "new drug" as in the US Patent Act.

2) The main reason for the amendment of the enforcement decree at issue is to clarify the legal basis for limiting the scope of drug inventions eligible for application for registration of extension of patent term as stated above, and reject the term extendability of patented inventions related to "drugs subject to data submission" for which the obligatory submission of safety and effectiveness data is partially exempted as the activity and safety thereof have already been demonstrated by the existing permission.

3) The drug at issue is a "drug subject to data submission" and the obligatory submission of data required for permission has partially been exempted thanks to the prior permission granted to existing Tretinoin drugs. In addition, both Alitretinoin and Tretinoin show a property and medicinal effect that are generated when combined with RAR.[5] Furthermore, both of

5) Refer to Retinoid A Receptor.

them are metabolized into 2 different isomers after oral administration, resulting in 3 isomers (9-cis retinoic acid, tretinoin, and isotretinoin)[6] existing simultaneously in the blood, which implies that the chemical structure of the active portion producing a medicinal effect is basically identical.

3. Whether the IPTAB Decision is in Error

A. Interpretation of Enforcement Decree at Issue

1) Interpretation Method

As laws are in principle universally reasonable norms that are identically binding to unspecified individuals, the interpretation of laws should be objectively reasonable by revealing their standard meaning and be consistent so as to be accepted by as many people as possible to ensure legal stability. On the other hand, as positive laws are developed in consideration of cases that are universal and typical, when applying such laws it is also required to interpret them to ensure the most reasonable solution for a specific case. In other words, the objective of legal interpretation is to seek specific validity within a range in which the legal stability is not deteriorated. Moreover, to do so, the interpretation in principle should be as faithful as possible to the usual meanings of the words used in the laws, and must be a systematic and logical interpretation that takes into account the purpose and intent of legislation, legislation and amendment history, harmony with the overall legal order, and relationship with other regulations, in order to ensure a reasonable interpretation that can respond to the demand for such legal interpretation (refer to the Supreme Court en banc decision 2011Da83431 rendered on January 17, 2013).

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6) Refer to Paragraph 3-B below.

2) Detailed Interpretation

A) Amendment History

(1) With the amendment of the Patent Act through Regulation No. 3891 on December 31, 1986, the application system for extension of patent term was newly introduced.[7] Through the further amendment of the Patent Act with Regulation No. 4207 on January 13, 1990, said system was revised to the application system for registration of extension of patent term, and the provision number was changed into Article 89. Since then, although there have been several minor amendments including the deletion of the provision specifying the lower limits of less than 2 years, until the old Patent Act became obsolete, the extension of patent term had been allowed only for "inventions prescribed by a Presidential Decree which require a long period of time to complete activity and/or safety tests required for permission or registration (hereinafter referred to as "permission et al.") pursuant to other regulations."

(2) Meanwhile, since the enforcement decree[8] of the

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7) Article 53 (Term of Patent)
① Term of patent shall be 15 years from the date of its announcement if application is publicly announced, or from the date patent rights are registered if application is not publicly announced.
② Notwithstanding the regulation set forth in Paragraph 1 above, the Commissioner of the KIPO may extend the term of a patent by up to 5 years where the exploitation of the patented invention requires permission or registration pursuant to other regulations, and **a long period of time may be required to complete activity and/or safety tests required for such permission or registration**.
③ **Other requirements such as the scope of patented inventions** eligible for extension of patent term pursuant to the regulation set forth in Paragraph 2 above shall be prescribed by a Presidential Decree.

8) Article 9-2 (Approval for Extension of Patent Term) of the Enforcement Decree of the Patent Act (such amended by the Presidential Decree No. 12199 on July 1, 1987)
① An invention whose term of patent (hereinafter referred to as "term of patent") is extendable pursuant to Article 53(2) of the Act shall be

Patent Act at the time of the launch of the application system for extension of patent term, “invention of a drug that requires item permission pursuant to the Pharmaceutical Affairs Act for the exploitation of the patented invention” were generally defined as “inventions prescribed by a Presidential Decree” in accordance with the delegation by the Patent Act, and “provisions of the enforcement decree at issue” eventually define the aforementioned “drug” more specifically as “a drug that is manufactured based on a “new substance (refers to a substance for which the chemical structure of the active portion producing a medicinal effect is new) as an active ingredient and that is the first to be granted item permission.”

Although a prospective enactment of an enforcement decree of the Patent Act, which will define “new substance” with an extremely similar purport to that of the provision defining “new drug” in the old Patent Act, was announced in the process of amending the enforcement decree at issue (Defendant's Exhibit 7-1 and 2, Defendant's Exhibit 8-1 and 2), the actual enforcement decree was enacted differently from what was announced (the defendant has not submitted any data or information as to the details and background of said enactment that differ from what was announced in advance even though the defendant was in a relevant position, such as requesting examination of the amendment draft to the Ministry of Government Legislation).

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such that is domestically exploited or ready to be exploited at the time of applying for extension and such that is subject to any of the following provisions:

1. **Invention of a drug that requires item permission** pursuant to Article 26(1)the Pharmaceutical Affairs Act for the exploitation of a patented invention.

2. Invention of pesticide or raw substances thereof that are required to be registered pursuant to Article 8(1) and Article 9(1) of the Pesticide Control Act for the exploitation of a patented invention

B) Legislation Purport and Objectives of Regulations

(1) The explanatory substances and examination report made in the process of amendment to Regulation No. 3891 of the Patent Act effective on December 31, 1986, which first introduced the patent term extension system, contain the following statements from which the purport and objectives of the legislation can be deduced.

> With the advancement and complication of technologies, not only do research and development activities involve a longer period of time and more expenses, but various regulations on products such as safety or pollution prevention have been tightened, which has eventually resulted in a longer period of time being required to commercialize an invention and a shorter period of time for the inventor to be compensated for his or her invention through the launch of patented products in the market. Therefore, it appears to be necessary not only to extend the current term of a patent, which is 12 years, to a longer period to the extent that the interests of patent customers are not significantly damaged, which is 15 years according to international practices, but also to introduce a patent term recovery system to reinforce inventor protection.

(2) In consideration of said purport and objectives, the patent term extension system set forth in the old Patent Act requires permission for the exploitation of a patented invention during the patent's term and extends the patent's term by a maximum period of 5 years equivalent to the unexploitable period for a patented invention requiring a long period of time to complete required tests for permissions, etc. Inventions of drug or pesticides are subject to permission or registration by regulatory authorities pursuant to the Pharmaceutical Affairs Act or Pesticide Control Act before the exploitation of a patented invention is allowed to ensure safety and effectiveness, and these required tests and examinations generally take a long time to complete. Consequently, the patent holder cannot exploit his or her patent during the patent period, experiencing a disadvantage of not enjoying profits from the patent, which is against the principle of equity compared to patents in other industrial sectors.

Therefore, Article 89 of the old Patent Act is intended to extend the term of a patent by a period equivalent to the unexploitable period for the patent up to a maximum of 5 years in order to resolve such irrationality and protect and encourage drug-related inventions in order to promote technical development.

C) Purport of Delegation

(1) As criteria to determine the eligibility of a patented invention for application for patent term extension belong to the field of expertise and technology and such criteria need to be revised in order to cope with technical development and the current situation actively and flexibly, the delegation provision at issue is intended to delegate the revision of said criteria to sub-regulations rather than specifying said revision in detail directly in the regulations. However, the delegation provision at issue limits the scope of term-extendable patented inventions to "inventions that require a long period of time to complete the activity and/or safety tests needed for permissions, etc."

(2) Given the legislation purport, objectives, provisions and the format of the delegation provision at issue, the only thing that should be clearly determined when interpreting the scope of authorization of the delegation provision at issue is whether the activity and/or safety tests required for permission actually take a long period of time to complete, and it is difficult to say that whether the applicable drug is a 'new drug' pursuant to the old Pharmaceutical Affairs Act is the absolute criteria. This means that even if the invention of a 'new drug' generally involves a longer time for clinical trials and examinations and requires continuous development after application to secure permissions, etc. compared to other medical inventions, in consideration of the legislation purport, objectives, provisions, and the format of the delegation provision at issue, it is hard to deem it reasonable that the scope of authorization of the delegation provision at issue is limited to the invention of 'new drugs' based on such circumstances.

(3) Given the fact that drug products with less than 1 year of patent term extension have frequently been found among patent term-extended drugs designated as ‘new drugs’ since the launch of the patent term extension system (Plaintiff's Exhibit 25, 28, 29-1 or 29-3), and the fact that the examination by the Ministry of Food and Drug Safety on the drug at issue consisting of geometric isomers took a total of 484 days, it is hard to conclude that only new drugs require a long period of ‘time to complete activity and safety tests,’ which also gives a legitimate reason not to limit the scope of authorization of the delegation provision at issue only to the invention of “new drugs.”

D) Usual Meanings of Words

(1) The relevant enforcement decree at issue prescribes 「Invention of a drug which is made of a new “substance in which the chemical structure of the active portion producing medicinal effect is new” and which is first to be granted item permission」 as a patent term-extendable invention.

However, it is obvious that such regulation regarding the definition of “new substance” does not match in a literal sense the definition of a “new drug” set forth in Article 2 of the old Pharmaceutical Affairs Act (“New drug” refers to a drug made of a substance whose chemical structure or essential composition is totally new, or a compound drug containing a new substance as an active ingredient, as designated by the Minister of Food and Drug Safety”).

Meanwhile, the regulations for item permission, notification, and examination of drugs, which define the new drug (subparagraph 7 of Article 2) in a similar way as the old Pharmaceutical Affairs Act, define the “active ingredient” as a substance or substance group (includes herbal medicine whose pharmacologically active ingredient has not been clearly discovered) as a main ingredient which is expected to produce, directly or indirectly, a medicinal effect for the drug through its intrinsic pharmacological action (subparagraph 1 of Article 2).

(2) It appears that there is no generally developed concept for the meaning of "active portion producing medicinal effects" in the pharmaceutical sector.

(3) Meanwhile, pharmaceutical inventions[9] that are questionable as to their eligibility for patent term extension include medical usage invention" (Supreme Court Decision 2012Hu3664 rendered on May 16, 2014), "selection invention" (Supreme Court Decision 2012Hu3664 rendered on May 16, 2014), "isomer invention" (Supreme Court Decision 2002Hu1935 rendered on October 24, 2003), "salt invention," "crystalline invention," (Supreme Court Decision 2010Hu2865 rendered on July 14, 2011), "formulation invention," (Supreme Court Decision 2009Hu4322 rendered on October 13, 2011), medical usage invention consisting of usage and dosage," (Supreme Court en banc Decision 2014Hu768 rendered on May 21, 2015) and "manufacturing process invention."

A medical usage invention consists of an active ingredient and its medical use based on a key technical concept in which a specific substance (active ingredient, hereinafter referred to as "active ingredient") delivers a therapeutic effect against a specific disease (refer to Supreme Court Decision 2012Hu3664 rendered on May 16, 2014). Even the selection invention with claims for compound as a subordinate concept of active ingredient, the isomer invention with claims for optical and geometric isomer of active ingredient, the salt invention that adds a different salt to the same active ingredient, the crystalline invention that varies the active ingredient and crystal form, the second medical usage invention for new medical uses, and the usage and dosage invention for additional usage and dosage are commonly based on the technical concept that a specific active ingredient delivers a therapeutic effect against a specific disease. On

9) Refer to substances used for diagnosis, cure, relief, treatment or prevention of diseases for human beings or animals (Article 96(2) of the old Patent Act and Article 2 of the old Pharmaceutical Affairs Act).

the other hand, there are some cases in pharmaceutical inventions where only the therapeutic effect of an active ingredient against a specific disease is discovered while there are other cases where even the pharmacological mechanism as a physiological activity occurring in a living body to produce such therapeutic effect is discovered.

(4) In consideration of the meaning of active ingredient in pharmaceutical inventions and examples of use stated in each regulation, it appears to be more reasonable in terms of a grammatical interpretation to understand a new "substance in which the chemical structure of the portion that delivers a medicinal effect" as a substance in which the chemical structure of the active portion producing a theraputic effect against a specific disease through its intrinsic pharmacological action (in some cases, pharmacological mechanism has not been uncovered) is new, rather than a new drug pursuant to the old Pharmaceutical Affairs Act as argued by the defendant.

E) Summary: Interpretation of Enforcement Decree at Issue

Through a comprehensive consideration of the legislation purport and objectives, purpose of delegation, and the amendment history of the old Patent Act based on the literal meaning of the delegation provision at issue as well as the enforcement decree at issue as reviewed above, it is reasonable to interpret the drug stipulated in the delegation provision at issue as a drug which produces a different therapeutic effect from that of an already approved drug, is made of a "substance in which the chemical structure of the portion producing said therapeutic effect is new" as an active ingredient, and is the first to be granted item permission (however, in legislative terms, it would be more desirable to specify more clearly the scope of delegation by exemplarily listing the details of inventions requiring a long period of time, which will be specified in the enforcement decree, or providing a detailed explanation of the criteria for inventions requiring a long period of time).

B. Whether the Drug at Issue is Subject to Enforcement Decree at Issue

1) 9-cis retinoic acid, which is the active ingredient of the drug at issue, is in a geometric isomer[10] relationship with Tretinoin and Isotretinoin, which are the active ingredients of an existing drug having item permission (Defendant's Exhibit 14). It can be said that the active ingredient of the drug at issue has a different chemical structure, as its 3-dimensional structure is different from that of active ingredient in an existing item permission-granted drug.

   Meanwhile, as the 3-dimensional structures of geometric isomers are different from each other, generally there are significant differences in physicochemical properties or biological activity such as ionization.

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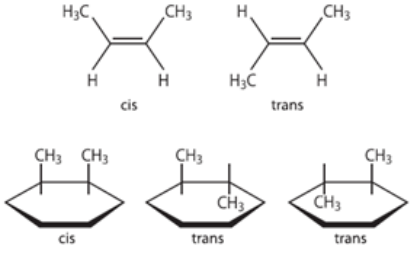
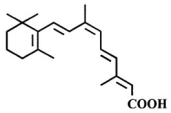
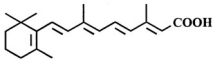
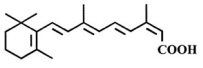
10) "Geometric isomer" refers to a compound having the same molecular structure but showing different properties due to a different array of atoms. Geometric isomers are classified into "structural geometric isomers" with the same molecular formula but different combination order of atoms, or "stereoisomers" with the same combination order of atoms but different spatial arrangement of atoms or atom groups. Further, stereoisomers are classified into geometric isomers or "enantiomers" whose three-dimensional structure cannot be superimposed, as they have the same molecular formula but have a bisymmetrical structure.
Geometric isomers are generated from varied positions in an atom-fixed structure or near bond in a carbon-carbon double bond. In the cis type, atoms or atom groups of the same kind are located on the same side while in the trans type, they are located on opposite sides (refer to the figure below).



Item name (active ingredient)	Alitretinoin (9-cis retinoic acid)	Tretinoin (all-transretinoic acid)	Isotretinoin (13-cis retinoic acid)
Chemical structure	 9-cis-RA	 all-trans-RA	 13-cis-RA

2) Moreover, unlike Tretinoin which is only bonded to RAR in the retinoid receptor,[11] 9-cis retinoic acid bonds not only to RAR but also to RXR.[12] In addition, 9-cis retinoic acid delivers a therapeutic effect for chronic hand eczema, which is not shown in Tretinoin (Plaintiff's Exhibit 5, Defendant's Exhibit 14, 16, and 17), and such difference in therapeutic effect seems to originate from the difference in said action mechanism.

3) Therefore, although both 9-cis retinoic acid and Tretinoin have a common property of being bonded to RAR, even in consideration of the fact that Tretinoin may be isomerized when the drug at issue is administered into a human body, given the general properties of geometric isomers and differences in action and effects between active ingredients, it would be reasonable to see the drug at issue (as a product that delivers a therapeutic effect for chronic hand eczema different from that of existing item permission-granted drugs, that is made of a “substance in which the chemical structure

11) Receptor: refer to a structure that exists in the cell membrane or cytoplasm. It recognizes a substance or physical stimulus outside the cell and generates a specific reaction to the cell. The main body consists of protein, which is uniquely bonded in a specific area when a specific substance is recognized.

12) Refers to Retinoid X Receptor.

of the portion producing the said therapeutic effect is new," and that is the first to be granted item permission.

C. Summary: Whether the IPTAB Decision is in Error

Therefore, despite the fact that the term-extendable patented invention at issue can be classified into "inventions specified by the enforcement decree at issue" which not only are required to be granted the item permission pursuant to the old Pharmaceutical Affairs Act for the exploitation of a patented invention, but require a long period of time to complete the activity and safety tests needed for permission, the defendant's decision to reject the application for term extension of patent at issue for the reason that the drug at issue is not a new drug is in error.

4. Conclusion

As such, the Plaintiff's petition to revoke the IPTAB decision on this case is well grounded and therefore shall be granted

Presiding Judge Hwansu KIM
Judge Jutak YOON
Judge Hyeonjin JANG

Claims for Patented Invention at Issue

Claim 1. (omitted)

Claim 2. (deleted)

Claim 3. In Claim 1 above, where M is potassium, a process to generate potassium salt of 3-methyl-4-oxocrotonic acid in Chemical Formula I through the hydrolysis from ethyl-3-methyl-4-oxocrotonate in the presence of potassium hydroxide in the same reaction system.

Claim 4. In Claim 1 above, a process in which X in Chemical Formula II is chlorine.

Claim 5. In Claim 1 above, a process to isolate the (Z)-isomer of C15-triphenylphosphonium salt from the (E)-isomer used for the synthesis of β-carotene and the mother liquid containing an isomeric mixture of (Z)-isomer and contain the following stages:

a) Stage to extract concentrate of mother liquor using methylene chloride;
b) Stage to mix an organic phase with ethyl acetate / n-butanol;
c) Stage to distill ethyl acetate / methylene chloride;
d) Stage to substitute the distilled volume with ethyl acetate;
e) Stage to crystallize (Z)-isomers; and
f) Filtering and drying stage.

Claim 6. In any of Claims 1, 3 or 5 above, a process to make the reaction occur at a temperature of -15℃ or 15℃

Claim 7. In any of Claims 1, 3 or 5 above, a process to make the

reaction occur in the presence of low quality alcohol

Claim 8. In any of Claims 1, 3 or 5 above, a process in which the base is alkali hydroxide

Claim 9. In Claim 8 above, the base is potassium hydroxide

Claim 10. In any of Claims 1, 3 or 5 above, a process to perform post-treatment of reaction mixture according to the following stages:

a) Stage to extract using methylene chloride;
b) Stage to set the pH of aqueous phase to about 3 to 4 using appropriate mineral acid;
c) Stage to extract using methylene chloride;
d) Stage to distill methylene chloride and continuously insert methanol to substitute the solvent with methanol; and
e) Stage to separate the crystallized 9-(Z)-retinoic acid from the mixture.

Claim 11 (deleted)

Claim 12 (deleted) <End>

PATENT COURT OF KOREA
FIFTH DIVISION
DECISION

Case No.: 2017Heo5917 Rejection (patent)

Plaintiff: SAMA PHARM CO., LTD.

Defendant: Commissioner of the Korean Intellectual Property Office

Date of Final Trial: April 13, 2018

Decision Date: June 8, 2018

ORDER

The Plaintiff's petition is dismissed.
The cost arising from this litigation shall be borne by the Plaintiff.

PLAINTIFF'S DEMAND

The IPTAB decision on Case No. 2015Won7912 rendered on June 22, 2017 shall be revoked.

OPINION

1. Background

A. Plaintiff's Claimed Invention

1) On February 3, 2012, the plaintiff filed an application for patent on an invention entitled, "**novel conventional granules dosage form comprising sildenafil or pharmaceutically acceptable salt thereof as an active ingredient**" with a total of 9 claims, designating August 1, 2011 as the date of claimed priority. On February 16, 2015, the defendant notified the plaintiff of the grounds for rejection that "The novelty of the plaintiff's claimed invention is denied, as Claim 1 is subject to subparagraph 5 of Article 29(1) of the Patent Act, and the inventive step of said invention is denied as all claims are subject to Article 29(2) of the Patent Act."

2) Consequently, the plaintiff submitted supplementary statements twice on April 16, 2015 and October 23, 2015, deleting Claims 3 and 5 and amending Claim 1 (hereinafter, the plaintiff's final application after amendment is referred to as "claimed invention at issue"). Details of Claim 1 amended are as follows.

[Claim 1]

Fast-dissolving oral granules dosage form (hereinafter referred to as "**Element 3**") comprising sildenafil[1] or pharmaceutically

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1) Sildenafil is used for the treatment of erectile dysfunction as a selective inhibitor of Cyclic guanosine 3', 5'-monophosphate phosphodiesterase type 5. This substance is used in the form of water-soluble citrate salt (citrate) to ensure fast absorption and outstanding bioavailability and is on the market as an oral erectile-dysfunction medication.

acceptable salt thereof (hereinafter referred to as "**Element 1**") as well as sugar or sugar alcohol-based fast dissolving carrier (hereinafter referred to as "**Element 2**") selected from a group consisting of xylitol, mannitol, isomalt, sorbitol, maltitol, refined white sugar, lactose, inositol, erythritol, crystalline fructose, trehalose, ribitol, arabitol, galactitol, lactitol, maltotritol and a mixture thereof, in which said fast-dissolving carrier is made of sugar or sugar alcohol (hereinafter referred to as "**Element 4**") which satisfies requirements (1), (2), and (3) stated below:

(1) Instantaneous solubility of 30mg/ml or more;
(2) 5 minute solubility of 50mg/ml or more; and
(3) Instantaneous solubility is no more than 90% of the maximum solubility.

3) The main details of the specifications of the claimed invention at issue are as stated in the table below.

☐ **Pertinent Art**
This invention is about a fast dissolving granules dosage form not only comprising sildenafil or a pharmaceutically acceptable salt thereof as an active ingredient and characterized by fast dissolution in the mouth within 20 seconds after oral administration leaving no feeling of foreign matter or residues. More specifically, this invention is for a novel fast-dissolving granules dosage form obtained by assembling fast-dissolving carriers satisfying certain conditions, which not only accelerates the dissolution and absorption of the active ingredient with a time of peak blood concentration (Tmax, hereinafter referred to as "Tmax")[2] of less than an hour, but also reduces the deviation of Tmax between individuals to show over 80% of R(Tmax, 1h) as well as provides no bitter taste (refer to paragraph number [[0001]).

2) Time of peak blood concentration (Tmax): Bioavailability means the amount and rate of active ingredients absorbed from a drug and delivered to the site of action, and at this point, generally pharmacokinetic parameters

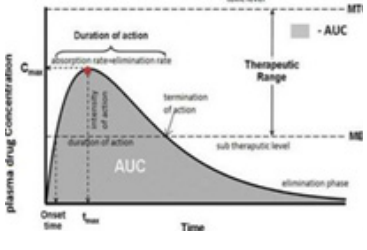
☐ **Technologies Used for Invention**

Generally to reduce the onset time, such method can be considered as accelerating the disintegration of dosage form in the stomach after oral administration to speed up the absorption of active ingredients. In addition, it is also possible to design a dosage form to easily crumble in the mouth before the drug arrives in the stomach (orally disintegrating tablet), or design the dosage form in a film shape (strip dosage form), in which the film covering the tablet starts to crumble when it is attached or not attached to the oral mucosa to speed up the absorption of the drug (refer to paragraph number [0004]).

Korean Patent No. 435514 discloses not only a quick acting dosage form for sildenafil lactate and saccharides, disintegrants, binders, excipients or lubricants that are usually used in the pertinent art as a pharmacologically acceptable carrier. Lactose, mannitol, sorbitol, xylitol, erythritol, dextrose, sucrose, fructose, ribulose, maltodextrin and parathinose are exemplified as available saccharides. In particular, it also discloses that porosification of the aforementioned saccharides through spray drying is desirable, as porosity can increase the solubility in the mouth (refer to paragraph number [0007]).

Although a number of attempts have been made in this technical sector to reduce the onset time using sildenafil as an active ingredient, it can be confirmed that there has been no attempt to design a final dosage form in a granules shape to reduce the onset time, deliver no feeling of foreign matter or residues, and remove the bitter taste so as to enhance the administration convenience (refer to paragraph number [0015]).

(AUC, Cmax, Tmax) are used. The general plot to display them is as follows. On the chart below, time of peak blood concentration (Tmax) refers to the temporal point at which the active ingredient in the blood from the drug absorbed peaks in concentration (Cmax), which also reflects the absorption rate of the drug.



☐ **Invention Details**

Fast dissolving granules dosage form obtained by assembling sildenafil or pharmacologically acceptable salt thereof and fast dissolving carrier selected from a group consisting of sugar or sugar alcohol, also characterized by dissolving rapidly in the mouth after oral administration, in which sugar or sugar alcohol is characterized by being selected from a group consisting of xylitol, mannitol, isomalt, sorbitol, maltitol, refined white sugar, lactose, inositol, erythritol, crystalline fructose, trehalose, arabitol, galactitol, lactitol and maltotritol, and a mixture thereof (refer to paragraph numbers [0019], [0021], respectively).

The inventors at issue have invented a novel fast dissolving granules pharmacological dosage form comprising sildenafil as an active ingredient, which crumbles rapidly in the mouth and overcomes all disadvantages of existing strip dosage form and granules dosage form. They have made the novel discovery that when using a fast dissolving carrier that satisfies certain conditions, surprisingly the feeling of foreign matter and residue is removed, Tmax is shortened compared to an orally disintegrating tablet or strip dosage form and deviation between individuals decreases, which has eventually led them to this invention (refer to paragraph number [0050]).

B. Defendant's Rejection and Details of Decision at Issue

1) On December 1, 2015 the defendant rejected the plaintiff's application for the reasons that “As the claimed invention at issue is such that can be easily invented by a person who has ordinary skills in the pertinent art (hereinafter referred to as “a person having ordinary skill in the art”), the inventive step is denied and therefore, the claimed invention cannot be patented.”
2) As the plaintiff on December 31, 2015 filed a petition for trial to the IPTAB to revoke said rejection, the IPTAB heard the petition as Case No. 2015Won7912 and made a decision on June 22, 2017 to dismiss said petition (hereinafter referred to as the “decision at issue”) for the reasons that “It cannot be acknowledged that the Claim 1 of the claimed invention at

issue (hereinafter referred to as “Claim 1 invention at issue”) shows remarkably outstanding effects of reducing not only the feeling of foreign matter and residues but also the bitter taste compared to an invention entitled “Fast acting dosage form of sildenafil lactate” published on September 26, 2003, before the application at issue (Domestic Patent Gazette No. 2003-76051, hereinafter referred to as “prior art”), that the effects generated when the dissolution conditions of the Claim 1 invention are met are better than those from the prior art, ensuring a technical significance limited to said dissolution conditions, and that Tmax and standard deviation thereof are reduced significantly compared to the prior art. Therefore, the inventive step of the Claim 1 invention at issue is denied since said invention is such that can be easily invented by a person having ordinary skill in the art, and any application should be rejected as a whole if any of the claims thereof is subject to grounds for rejection.”

C. Details of Prior Art

The main details of the prior art published before the application at issue are as shows in the table below.

The prior art is about a fast acting dosage form comprising sildenafil, an erectile dysfunction medication, in the lactate shape for fast dissolution in the mouth, which is easy to administer, provides no bitter taste thus increasing compliance,[3] and delivers outstanding solubility in the mouth to enable a rapid onset, which also overcomes the disadvantages of the existing sildenafil-containing fast acting dosage form in terms of bitter taste blocking and bioavailability by containing sildenafil in the shape of lactate to ensure fast dissolution in the mouth.

3) Compliance: refers to the patient's administration of medications according

In addition, the prior art comprises saccharide, disintegrant, binder, excipient or lubricant that are ordinarily used in the pertinent art as a pharmacologically acceptable carrier. Saccharide is an ingredient that affects the sweet taste, solubility and touch in the mouth and to produce such effects, outstanding sweetness and water solubility are required. Saccharides available include lactose, mannitol, sorbitol, xylitol, erythritol, glucose, sucrose, fructose, ribulose, maltodextrin, and parathinose, etc. It is particularly desirable to use a saccharide that is porosified through spay-drying as porosity can increase the solubility in the mouth.
For said disintegrating ingredient, it is desirable to design a porous dosage form using a pore forming substance to generate pores in the fast-acting dosage form based on the prior art to ensure fast dissolution by the saliva in the mouth. Sublimable substance, in other words, at least 1 kind selected among menthol, campa, chimol, organic acid, lower fatty acid or a mixture thereof can be used as a pore forming substance. Desirably, menthol is recommended.

[Factual Basis] Undisputed facts, statements in Plaintiff's Exhibit 1, 2, 9, and 12, and Defendant's Exhibit 2, 3, and 5, and purport of the overall argument

2. Summary of Plaintiff's Arguments

The inventive step of the Claim 1 invention at issue should be acknowledged because said invention is not such that can be easily invented by a person having ordinary skill in the art, and therefore the IPTAB decision to reject it is in error.

A. Claim 1 invention at issue is an oral granules dosage form.

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to the doctor's prescription and the pharmacist's instructions. As disease control by drugs may fail if the patient does not comply with such instructions, drug development should take into account the patient's compliance.

While the existing orally disintegrating tablet (ODT),[4] which is the prior art, is intended to block the bitter taste and accelerate the onset time, the Claim 1 invention at issue additionally provides an effect of removing the feeling of foreign matter and residues in the mouth by microscopically classifying the solubility of the fast dissolving agent, and the prior art is not motivated to induce or produce such effect.

B. Unlike the Claim 1 invention at issue which uses the intrinsic property of sugar or sugar alcohol-based fast dissolving carrier, the prior art has selected a composition that enhances the solubility by creating pores using a sublimable substance such as menthol, which means that the technical compositions of these two inventions are different from each other, and consequently it is not easy for a person having ordinary skill in the art to easily derive the idea of sildenafil-based fast dissolving granules dosage form.

C. While the prior art contains sildenafil lactate as an active ingredient rather than sildenafil free base,[5] the Claim 1 invention

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4) Orally Disintegrating Tablet (ODT): An orally disintegrating tablet is called by various names, such as orally fast disintegrating tablet or fast dissolving tablet. The US Orange Book defines it as 'a solid dosage form containing medicinal substances, which disintegrates rapidly, usually within a matter of seconds, when placed upon the tongue'. Unlike the existing sublingual tablet or buccal tablet, the orally disintegrating tablet disintegrates simply by the saliva without water in the mouth within a minute or even 10 seconds, and after disintegration, the main drug is absorbed through the oral and gastric mucosa and delivered throughout the vascular system of the body.

5) Free base: It is an organic base which stays in the base state rather than forming a salt by combining with a proton. It has been known that using salts rather than using acids or bases in the free base state increases the dissolution rate of a drug. Unlike free base, salt is an ionic compound in which the anions of acid and the cations of a base electrostatically combine together. Such salts are widely used in the pharmaceutical

at issue contains sildenafil free base with low solubility to induce high solubility and bioavailability. As such, its significantly improved effect can be acknowledged.

D. As the Tmax figures shown in Embodiment 1 and 2 of the prior art are the pharmacokinetic parameters from clinical trials performed on rabbits, they are not comparable with Tmax figures for the Claim 1 invention at issue, which are from clinical trials performed on human beings. Tmax of a drug is proportional to the onset time, and it has been demonstrated that the mean Tmax in Embodiment 2 of the Claim 1 invention at issue is measured to be 0.7 hours, which is 0.4 hours shorter than the mean Tmax of 1.1 hours for the Viagra product,[6] along with reduced standard deviation and coefficient of variation[7] of Tmax for the Claim 1 invention at issue, representing a significantly improved effect of said invention.

3. Discussion: Inventive Step of Claim 1 Invention at Issue

A. Comparison of Elements between Claim 1 Invention at Issue and Prior Art

Element	Claim 1 Invention at issue	Prior art
1	Sildenafil or a pharmacologically acceptable salt thereof	Sildenafil lactate Sildenafil citrate salt Sildenafil fee base

industry, as they usually improve the solubility of a drug and increase its melting point, making it easier to manufacture drugs.

6) Product name: Viagra®; Ingredients: Sildenafil citrate; Producer: refers to the product from Pfizer. Hereinafter referred to as “Pfizer's existing product.”

7) Coefficient of variation: Standard deviation divided by mean value

Element	Claim 1 Invention at issue	Prior art
2	Fast dissolving carrier which is sugar or sugar alcohol selected from a group consisting of xylitol, mannitol, isomalt, sorbitol, maltitol, refined white sugar, lactose, inositol, erythritol, crystalline fructose, trehalose, ribitol, arabitol, galactitol, lactitol, maltotritol or a mixture thereof	Saccharides such as lactose, mannitol, sorbitol, xylitol, erythritol, glucose, sucrose (white sugar), fructose, ribulose, maltodextrin, or parathinose
3	Fast dissolving oral granules dosage form comprising	Fast dissolving dosage form such as tablet, capsule or granule
4	The aforementioned fast dissolving carrier, which is a fast dissolving oral granules dosage form characterized by sugar or sugar alcohol, satisfying the following requirements (1), (2), and (3): (1) Instantaneous solubility of 30mg/ml or more; (2) 5 minute solubility of 50mg/ml or more; and (3) Instantaneous solubility is no more than 90% of the maximum solubility.	The aforementioned saccharide is an important ingredient that affects the sweet taste, solubility, and touch in the mouth, and outstanding sweetness and water solubility are required to deliver such effects.

B. Element-specific Detailed Comparison

1) Comparison of Pertinent Art and Objectives

Claim 1 invention at issue relates to a fast dissolving granules dosage form which comprises sildenafil or a pharmacologically acceptable salt as an active ingredient and is characterized by rapidly

dissolving in the mouth. Since said invention is intended not only to increase the patient's compliance by removing the feeling of foreign matter and residues as well as the bitter taste but also to reduce the onset time, and the prior art, which is a fast acting dosage comprising sildenafil lactate for fast dissolution in the mouth as stated in its specifications,[8] is also intended not only to deliver no bitter taste in order to enhance compliance, but also to improve solubility in the mouth to reduce onset time, it appears that there is practically no difference between the inventions in terms of the pertinent art and objectives.

With regard to this, the plaintiff is arguing that as the prior art is an orally disintegrating tablet, it does not represent any intention to remove the feeling of foreign matter and residues other than the effects of blocking the bitter taste and rapid dissolution. However, given not only that the prior art also comprises saccharides ordinarily used for orally disintegrating tablets for the purpose of maintaining the organic functions in the mouth (sweetness, solubility, and tactile sense) not to deteriorate the patient's compliance, but that a person having ordinary skill in the art would probably consider the well-known fact that an orally disintegrating tablet requiring no water for administration requires a good "tactile sense"[9] in the mouth, the aforementioned plaintiff's argument is not well-grounded.

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8) Specifically, the specifications of the prior art are as follows: "This invention is about a sildenafil lactate-based fast acting dosage form that is comprised of sildenafil, an erectile-dysfunction medication, as an active ingredient in the shape of sildenafil lactate, not only to remove the bitter taste to increase the patient's compliance but to provide outstanding solubility to ensure rapid onset."

9) "Tactile sense" in the mouth includes the resistance or the feeling of a foreign substance generated when the particle rubs against the oral tissue while it is staying in the mouth. As such tactile sense is closely related to the solubility of the drug particle, it can be said that the prior art also has an intention to remove the feelings of foreign matter and residues.

2) Comparison of Element 1

Element 1 of the Claim 1 invention at issue and the corresponding composition of the prior art have no difference from each other in that both inventions are about a fast dissolving dosage form comprising sildenafil free base or sildenafil salt as an active ingredient.

With regard to this, the plaintiff is arguing that the Claim 1 invention at issue is different from the prior art in its composition in that the Claim 1 invention comprises a sildenafil free base of low solubility while the prior art only contains sildenafil lactate as an active ingredient. However, given that Element 1 comprises not only sildenafil free base but sildenafil salt as active ingredients, and the prior art also discloses sildenafil free base and citrate salt in addition to sildenafil lactate, it is hard to see that there are any significant differences in technical terms. Therefore, the aforementioned plaintiff's argument is not well-grounded either.

3) Comparison of Element 2

Element 2 of the Claim 1 invention at issue and the corresponding composition of the prior art have in common that both inventions comprise a “sugar alcohol” such as xylitol, mannitol or sorbitol, or “sugar” such as lactose as a carrier. There is no dispute between the parties as to this subject.

4) Comparison of Element 3

Element 3 of the Claim 1 invention at issue and the corresponding composition of the prior art are identical to each other in that both inventions are a fast dissolving granules dosage form.

With regard to this, the plaintiff is arguing that the Claim 1 invention at issue is different from the prior art in terms of composition as the prior art is only limited to the orally disintegrating tablet (ODT). However, given that the prior art stipulates that it is about a fast acting dosage form which covers not only tablets, but

capsules and granules, it is hard to see that the fast acting dosage form of the prior art is only limited to tablets. Therefore, the aforementioned plaintiff's argument is not well-grounded either.

5) Comparison of Element 4

Element 4 of the Claim 1 invention at issue and the corresponding composition of the prior art are in common in that both inventions use saccharides (sugar or sugar alcohol) as a carrier for the fast acting dosage form. However, Element 4 of the Claim 1 invention at issue specifies the following as solubility requirements: Instantaneous solubility and 5 minute solubility are required to be no less than 30mg/ml and 50mg/ml, respectively; Instantaneous solubility is required to be no more than 90% of the maximum solubility. On the other hand, the corresponding composition of the prior art shows a difference in that although it also uses saccharides with outstanding water solubility, no specific solubility requirements are specified (hereinafter such difference in specified requirements are referred to as “difference at issue”).

C. Discussion on Differences at Issue

1) Relevant Laws

When a claimed invention numerically limits the range of elements belonging to an invention published before the application of said claimed invention, unless the numerical limitation in the claimed invention is only for supplementary purposes as another element that can ensure the inventive step of the claimed invention is added, if no different effect or significant difference in effect is observed within the limited numerical range, the inventive step of said claimed invention should be denied, as such invention is just a simple numerical limitation that can be appropriately selected by a person having

ordinary skill in the art through ordinary and repetitive experiments (refer to Supreme Court Decision 92Da40563 rendered on February 12, 1993 and Supreme Court Decision 2004Hu448 rendered on April 15, 2005). If said claimed invention has a common subject with the published invention and only shows a difference from the published invention in terms of whether a numerical limitation is specified or not, and if the specifications of the claimed invention do not stipulate the significant effect to be derived from the application of numerical values in such limited range, it is hard to say that a significant difference in effect is present within the numerically limited range (refer to Supreme Court Decision 2004Hu448 rendered on April 15, 2005 and Supreme Court Decision 2007Hu1299 rendered on November 16, 2007).

2) Specific Discussion

On consideration of already acknowledged facts and the following circumstances acknowledged by aforementioned evidences based on said relevant laws, since not only is the difficulty of composition denied as the difference at issue is merely a simple numerical limitation that can be appropriately selected by a person having ordinary skill in the art through ordinary and repetitive experiments, but also a different effect from or critical significance of the numerical limitation is denied, it is hard to see that the inventive step of the Claim 1 invention at issue is granted for reasons of the difference at issue.

A) Difficulty of Composition

Although the claimed invention at issue explains in its specifications that the requirements for the instantaneous solubility and 5 minute solubility at issue are separate concepts that are different from the specific surface area[10] or particle size of the fast dissolving agent

10) Specific surface area refers to the surface area per unit mass or volume

(paragraph number [0055]), according to the explanations in other parts of said specifications (paragraph number [0037] through [0040]), as well as Tables 1, 2, and 5, the solubility requirements for the claimed invention at issue are the results[11] of a calculation of solubility or elution rate by the ordinarily used elution test method and linear regression method after grinding sugar or sugar alcohol used as fast dissolving carriers according to the intended use and classifying them according to the particle size[12] (D50, 30.7~144.0um/ 108.1~447.8um/ 192.2~648.3um),[13] which means that it can be seen that the main technical means to arrange said solubility requirements is the particle size of sugar or sugar alcohol used as carriers. However, according to the statement in Plaintiff's Exhibit 3, it has been widely acknowledged as of the date of claimed priority at issue that the surface area increases as the diameter of particles of dosage form decreases, and consequently a high rate of elution can be derived. In addition, as shown in the statement[14] in the specifications of the prior

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of a certain particle.

11) The respective solubility of manufactured example 1 through 33 of the claimed invention at issue was determined according to elution test method 2, and the inventor collected specimens at intervals of 1, 3, 5, 10, and 15 minutes and measured solubility for each time interval, plotted the solubility of specimens measured in 5 minutes on a separate chart and defined the Y intercept value of the linear regression curve as instantaneous solubility.

12) Particle size means the size of a particle.

13) Particle size distribution: D50 herein means a kind of method to display the particle size of powder, which is a diameter equivalent to the mean value (50%) of the particle size distribution curve. The size of particles that constitutes powder is not identical over all particles, but is distributed based on a specific particle size. Normal distribution is observed If the proportion of particles having a larger size than the mean particle size is equal to that having a smaller size than the mean particle size, but the distribution is generally not symmetrical. Generally, particle size distribution is represented by either a frequency distribution curve (modal diameter) or a cumulative distribution curve (median diameter).

art, even the inventor of the prior art has also been clearly aware of the fact that the solubility of a fast acting dosage form comprising fast dissolving agents significantly affects the tactile sense in the mouth and bioavailability. It is very probable that a person having ordinary skill in the art would not suffer any serious difficulties in selecting solubility requirements appropriate for sildenafil-based fast dissolving granules dosage form by performing experiments using domestically supplied sugar or sugar alcohol properly ground according to the intended use to compare the solution rate and tactile sense in the mouth. With regard to the solubility or dissolution rate of the sugar or sugar alcohol, since there was no specific difficulty in using grinding technologies (such as milling)[15] that were widely used as of the date of claimed priority for the claimed invention at issue to control the particle size, no difficulty in composition seems to exist herein, and it is also hard to see that any statement demonstrating the critical significance of limiting the solubility of sugar or sugar alcohol exists in the specifications.

With regard to this, the plaintiff is arguing that both inventions have different compositions in that the prior art has a composition that

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14) Detailed statements can be summarized as follows: "① This invention is about a sildenafil lactate-based fast acting dosage form which comprises sildenafil, which is used as an erectile dysfunction medication, as an active ingredient in the shape of sildenafil lactate producing not only no bitter taste to increase compliance but also outstanding solubility in the mouth for rapid onset time. ② Said saccharides are important ingredients affecting the sweet taste, solubility and tactile sense, and to deliver such effects, outstanding sweetness and water solubility are required. Saccharides available include lactose, mannitol, sorbitol, xylitol, erythritol, glucose, sucrose, fructose, ribulose, maltodextrin, and parathinose. In particular, it is desirable to porosify such saccharides through spray-drying, as porosity can increase the solubility in the mouth. ③ As shown in Figure 1, Embodiments 1 and 2, which are sildenafil lactate-based fast acting dosage forms manufactured according to this invention, have shown outstanding solubility, representing high bioavailability."

15) Refer to Plaintiff's Exhibit 2.

forms pores in the dosage form using a pore forming substance such as menthol, while the claimed invention at issue contains a composition of fast dissolving granules that increases the surface area of particles. However, as the specifications of the prior art stipulate that the use of a pore forming agent (such as menthol) in the dosage form is more desirable than using a disintegrating agent (such as polyvinylpyrrolidone), it is hard to see that the pore forming agent is an indispensable ingredient. Also, as the pore forming agent is a substance that helps disintegration of the tablet by forming pores therein, and is just a technical means to increase the surface area of the drug by promoting disintegration, it can also be said that the pore forming agent is similar to granules dosage form in its functional principle that is intended to improve solubility and bioavailability by increasing the surface area of particles. In particular, as granules is a dosage form that is assembled in the intermediate stage prior to the compression molding of raw materials, it is hard to see that there are difficulties in technical composition for omitting the tableting process, a part of the tablet manufacturing stage. Therefore, the aforementioned plaintiff's argument is not well grounded.[16)]

B) Significant Effect as to Removal of Feeling of Foreign Matter or Residues

The effect of the Claim 1 invention at issue should be evaluated through comparison with the effect of the prior art, rather than existing

16) With regard to this, the specifications of the claimed invention state as follows: "Although granules are an intermediate substance for tableting, it has been widely accepted that they are an intermediate substance to fill in the capsule. It has also been widely accepted that using granules as the final dosage form will significantly deteriorate the administration convenience; therefore, it is difficult to find an example in which an independent granules dosage form has enhanced the administration convenience or improved the pharmacokinetics of active ingredients." However, it is hard to see that omitting a manufacturing stage rather than adding a stage is difficult.

granules dosage forms. As reviewed above, the prior art has adopted the composition of sugar carrier in consideration of the "tactile sense" that corresponds to the feeling of foreign matter and residues, which is practically the same principle as sugar or sugar alcohol used as a fast dissolving carrier in the Claim 1 invention at issue.[17)]

The effect of removing the feeling of foreign matter and residues in the Claim 1 invention at issue is closely related to the solubility of sugar or sugar alcohol in Element 4, and as the solubility of sugar or sugar alcohol can be easily adjusted using the particle size as discussed above, it is reasonable to presume that a person having ordinary skill in the art can predict said effect of removing the feeling of foreign matter and residues.

However, when comparing the solubility values from Manufacture Example 10 and 11 (Mannitol), it is partially observed that the instantaneous solubility and 5 minute solubility are not proportional to the particle size, as shown in the table below.[18)]

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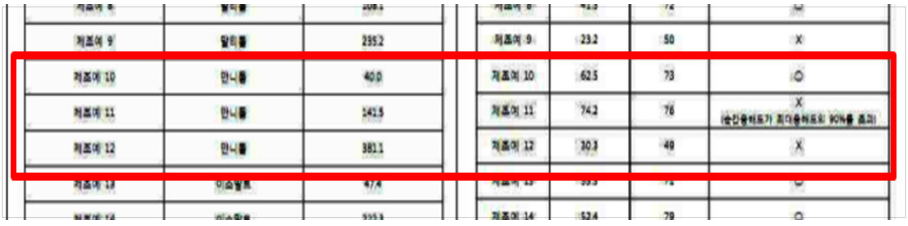
17) Specifically, paragraph number [0055] of the claimed invention at issue states as follows: "For the fast dissolving carrier used in this invention, sugar or sugar alcohol are desirably available but it is not limited to these. Specifically, pharmacologically acceptable sugar, sugar alcohol or a mixture thereof, such as xylitol, mannitol, isomalt, sorbitol, maltitol, refined white sugar, lactose, inositol, erythritol, crystalline fructose, trehalose, ribitol, arabitol, galactitol, lactitol, and maltotritol can be used. Among such sugar or sugar alcohol, if the instantaneous solubility and 5 minute solubility are no less than 30mg/ml and 50mg/ml, respectively, and the instantaneous solubility is no more than 90% of the maximum solubility, the effect of this invention of providing no feeling of foreign matter and residues can be achieved."

18) Refer to the statements in Table 1 in paragraph number [0076], Table 5 in paragraph number [0089] in the specifications of the claimed invention at issue.



Manufacture Example 9	Maltitol	235.2	Manufacture Example 9	23.2	50	X
Manufacture Example 10	Mannitol	40.0	Manufacture Example 10	62.5	73	O
Manufacture Example 11	Mannitol	142.5	Manufacture Example 11	74.2	76	X (Instantaneous solubility exceeds 90% of the maximum solubility)
Manufacture Example 12	Mannitol	381.1	Manufacture Example 12	30.3	49	X
Manufacture Example 13	Asofalo	47.4	Manufacture Example 13			O

However, according to each statement in Defendant's Exhibit 2 and 3, as well as the purport of the overall argument, as it is acknowledged as of the date of claimed priority for the claimed invention at issue that “As fine powder shows strong adhesiveness and cohesiveness, in some cases the particle size and elution show an opposite tendency even if the effective surface area for the solvent decreases due to incomplete moistness of condensation, although the size of drug particles is reduced” was a widely known fact,[19] it is highly probable that a person having ordinary skill in the art is clearly

19) Statements in the parts of Defendant's Exhibit 2 and 3 corresponding to this can be summarized as follows: “The occasionally observed reciprocal relationship between elution and particle size is attributable to the surface property of the drug. In some cases, the particle size and elution may show an opposite tendency, as the effective surface area for the solvent decreases due to incomplete moistness or condensation even if the surface charge and condensation reduces the particle size. In the early stage of dosage formation research, research that considers the effect of various additives to the elution of a drug should take place.”

aware of the possible solubility deterioration even if mannitol in Manufacture Example 10 and 11 is atomized (141.5um⇒ 40um), and therefore, as it is also predictable that the solubility of a sugar-based carrier may be inversely proportional to the particle size with no disturbance by adhesive phenomenon when the mannitol particle size exceeds the range of minute particles, it is also hard to see that said phenomenon is a result deviating from the predicted range achievable by a person having ordinary skill in the art.

As it is possible for a person having ordinary skill in the art to easily predict the fact that granulating the drug within an appropriate range of particle size will increase the solubility, which will lead to the elimination of the feeling of foreign matter and residues, it is hard to say that the effect of eliminating the feeling of foreign matter and residues in the Claim 1 invention at issue is what is significantly improved compared to the prior art.

C) Significant Improvement in Tmax and Standard Deviation thereof

Plaintiff's argument in this area rests on the premise that Tmax and its standard deviation in the Claim 1 invention at issue are better than those in the existing Viagra product, and Tmax in the prior art is similar to or worse than that in the existing Viagra product.

What must be discussed first is whether the Claim 1 invention at issue is significantly better than the existing Viagra product in terms of Tmax and standard deviation reduction. As it is a widely known fact in the dosage forming art that factors, including Tmax, which affect the pharmacokinetic parameters, include not only internal factors but physical factors such as solubility or disintegrability, and such physical properties are determined by the kinds and ratio of additives (excipients, disintegrants, binders, etc.) contained in the drug, unless the kinds and ratio of additives in each of the two inventions show a certain level of similarity, it can be considered useless to compare the bioavailability parameters in pharmacokinetic terms. However, given

that unlike the test group embodiment 2[20] containing mannitol excessively, the Viagra product of the control group is not an orally disintegrating dosage form, and the kinds and amount of excipients in Viagra are not clearly stated in the specifications of the claimed invention at issue, it would be reasonable to understand that Viagra has a different composition and ratio from the orally disintegrating dosage form comprising saccharides as main excipients,[21] and therefore, it is hard to conclude that the Claim 1 invention at issue shows a significant improvement in Tmax and its standard deviation compared to the existing orally disintegrating tablets based only on the Tmax values calculated from such inappropriately designed experiments.[22]

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20) It is stated that the content of mannitol (w/W%) in Embodiment 2 of the claimed invention at issue is 86.7% (=390.3/450) of the total weight of a tablet (refer to paragraph number [0092] through statements in paragraph number [0094]).

21) Excipient composition of the existing Viagra product is not clearly disclosed in the specifications at issue (refer to statements in paragraph number [0160] through [0164]). However, it has been known that excipients such as microcrystalline cellulose (also called powder-type crystalline cellulose) or lactose are frequently preferred for the compressed tablet that is generally produced through an assembly process (refer to Defendant's Exhibit 5), and in fact, the existing Viagra product comprises microcrystalline cellulose.

22) The applicant of the claimed invention at issue has discovered the fact that sometimes the onset time of a sildenafil-based orally disintegrating tablet is even slower than that of an ordinary tablet, and has stated on the specifications that an orally disintegrating tablet is not a proper dosage form for sildenafil (paragraph number [0045]). However, such statement does not justify selecting the existing Viagra product as the control group for the Embodiment 6 of the claimed invention at issue without any consideration of the kinds and ratio of excipients. Such discussion becomes even more obvious when reviewing the applicant's statement in the specifications, which says that he has derived this invention from the novel knowledge gained through the comparison with orally disintegrating tablets or strip dosage form that Tmax is reduced and deviation between individuals also decreases ([0050]).

Above all, to acknowledge the significance of the effect of the Claim 1 invention at issue, it should be acknowledged first that Tmax in the Claim 1 invention at issue is significantly better than that in the prior art, but there is no evidence which demonstrates such argument. With regard to this, the plaintiff is arguing that Tmax in the prior art is similar to or worse than that in the existing Viagra product. However, it is not appropriate to directly compare Embodiment 1 and 2[23] of the prior art with the existing Viagra product unless the kinds and amount of excipients in Viagra are clearly disclosed. Even comparing Tmax values[24] from Embodiment 1 and 2 of the prior art with that[25] of Viagra regardless of the composition and ratio of excipients in both drugs as argued by the plaintiff also produces

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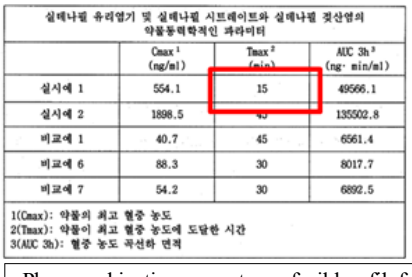
23) Proportion of saccharides added in the total weight of tablet in Embodiment 1 and 2 is 57.5% (=90/156.5) and 60.8% (=208.8/343.3), respectively.

24) Results gained from a test of oral administration to 3 3.5kg rabbits, which are as shown in the table below.



실데나필 유리염기 및 실데나필 시트레이트와 실데나필 젖산염의 약물동력학적인 파라미터			
	Cmax[1] (ng/ml)	Tmax[2] (min)	AUC 3h[3] (ng·min/ml)
실시예 1	554.1	15	49566.1
실시예 2	1898.5	45	135502.8
비교예 1	40.7	45	6561.4
비교예 6	88.3	30	8017.7
비교예 7	54.2	30	6892.5
1(Cmax): 약물의 최고 혈중 농도 2(Tmax): 약물이 최고 혈중 농도에 도달한 시간 3(AUC 3h): 혈중 농도 곡선하 면적			

Pharmacokinetic parameters of sildenafil free base, sildenafil citrate and sildenafil lactate			
	Cmax[1] (ng/ml)	Tmax[2] (min)	AUC 3h[3] (ng·min/ml)
Embodiment 1	554.1	15	49566.1
Embodiment 2	1898.5	45	135502.8
Comparative example 1	40.7	45	6561.4
Comparative example 6	88.3	30	8017.7
Comparative example 7	54.2	30	6892.5
1 (Cmax): Maximum blood concentration of drug 2 (Tmax): Time taken to reach the peak blood concentration of drug 3 (AUC 3h): Area under the blood concentration curve			

25) Results gained from a test of oral administration to 3 of 3.0 to 4.0kg New Zealand white rabbits, which are as shown in the table below.

results showing that Tmax from Embodiment 1 of the prior art is 5 minutes shorter than that of Viagra, and therefore, it is hard to conclude that the prior art is similar or even worse than Viagra in terms of Tmax.

Meanwhile, IPTAB in its trial judged that Tmax of the Claim 1 invention at issue was similar to or worse than that of the prior art, as the Tmax values at that time were 0.7 hours for the Claim 1 invention at issue and 0.25 to 0.74 hours for the prior art. However, as the Tmax for the prior art was gained from tests performed on rabbits and that for the Claim 1 invention at issue was gained from a clinical trial on human beings, it is inappropriate to compare such results directly, and therefore, it is hard to accept such results as they are.[26] However, as reviewed earlier, unless there is any evidence to demonstrate the remarkableness in effect of Claim 1 invention at issue, it cannot be said that such error makes the IPTAB decision in error.

D) Summary of Discussion

Through a comprehensive consideration of the aforementioned review results, it is determined that the Claim 1 invention at issue is such that can be easily invented by a person having ordinary skill in the art by combining the prior art with well-known and commonly

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Table 3. Mean pharmacokinetic parameters for intravenous injection of sildenafil citrate, oral administration of Viagra® and intranasal delivery of sildenafil microemulsions in rabbits (mean ± SD, $n = 3$).

	Dose (mg)	T_{max} (min)	Duration (min)	T_{abs} (min)	C_{abs} (nM)	K_e (h^{-1})	$T_{1/2}$ (h)	$AUC_{0-\infty}$ (nM h)	F (%)
IV	5.6	—	180	—	4395.1 (772.8)	0.55 (0.22)	1.37 (0.45)	2045.0 (646.8)	100.0
PO	50.0	1.5 (0.5)	238	20.0 (0.0)	8013.5 (552.5)	0.35 (0.07)	2.06 (0.40)	8580.3 (978.1)	33.6

26) Since it is widely known that if the species of experiment object is different, the internal factors affecting the drug metabolism change as pharmacokinetic parameters including Tmax are affected by internal factors (clearance, volume, etc.) related to the experiment object's drug absorption, distribution, metabolism, and excretion, and difference in bioavailability exists between the heterogeneous (refer to Plaintiff's Exhibit 9), it is not appropriate to directly compare the results of both experiments generating Tmax values for rabbits and human beings.

used art, and therefore, the inventive step of said invention should be denied.

4. Conclusion

Since the inventive step of Claim 1 invention is denied as mentioned above, patent registration should be rejected for the entire claimed invention at issue[27] and consequently, the IPTAB decision of the same purport is consistent with the analysis herein. Therefore, the plaintiff's petition to revoke the IPTAB decision is without merit and therefore dismissed.

Presiding Judge Seungryul SEO
Judge Yunhyung JEONG
Judge Donggyu KIM

27) For a patent application comprised of multiple claims, such application should be rejected as a whole if any of the claims thereof is subject to grounds for rejection (refer to Supreme Court Decision 91Hu578 rendered on February 25, 1992, Supreme Court Decision 96Hu603 rendered on April 25, 1997 and Supreme Court Decision 99Hu2181 rendered on December 24, 2001).

PATENT COURT OF KOREA
THIRD DIVISION
DECISION

Case No.: 2017Heo8367 Scope of Rights Confirmation (Patent)

Plaintiff: A

Defendant: B

Date of Final Trial: May 16, 2018

Decision Date: June 29, 2018

ORDER

1. The Plaintiff's petition is dismissed.

2. The cost arising from this litigation shall be borne by the Plaintiff.

PLAINTIFF'S DEMAND

The IPTAB decision on Case No. 2017Dang2542 rendered on November 3, 2017 shall be revoked.

OPINION

1. Background

A. Plaintiff's patented invention at issue (hereinafter the "Subject Invention") (Plaintiff's Exhibit 3 and 4)

1) Title of invention: Garbage disposal unit with automatic solid sorting device

2) Filing date of application/ Date of registration/ Patent No.: May 20, 2003/ March 29, 2005/ 481633

3) Claims

[Claim 1] A garbage disposal unit with an automatic solid sorting device comprising a garbage grinder (10) whose bottom half is made of perforated plate (14)[1] and with vertical front and back walls (11a, b) of horizontal type grinding barrel (11) installed with multiple rotator blades (12) and a horizontal type axis of rotation driven by a driving means (hereinafter "Element 1"), and a solid sorting device (20) with a floating barrel (21) that secures a floating space for solids with a ceiling (23) slanted towards solid outlets (24) and is installed perpendicularly to the top of the grinding barrel (11), with solid outlets (24) in which ceiling (24a) and bottom (24b) at the end of floating barrel (21) are slanted upward towards the direction to which solids are discharged and with a solid

1) Numbers or letters in parentheses refer to the drawing marks represented in the main drawings of the Subject Invention. Hereinafter, any relevant part in the Subject Invention and the invention subject to confirmation (hereinafter the "Invention for Review") shall be marked in the same manner.

discharge inducer (22) installed on the solid outlets (24).

[Claim 2] The garbage disposal unit with automatic solid sorting device of Claim 1, wherein the discharging holes in said perforated plate (14) are long holes (18) whose major axis is on a diagonal direction (d) for the rotation direction (D) of rotator blades (12).

[Claim 3] The garbage disposal unit with automatic solid sorting device of Claim 1, wherein a rise and fall-type baffle plate (27) that can be operated externally is installed at the ceiling (24a) of said solid outlets (24).

4) Main content and drawing

□ Technical field and conventional art

The Subject Invention relates to a garbage disposer that grinds garbage as a preliminary stage of garbage feed transformation and organic composting. More specifically, the Subject Invention relates to a garbage disposal unit with an automatic solid sorting device that eliminate the labor[2] involved in sorting solids, such as metal, vinyl, wooden chopstick, hard bone, etc. which shall not be in garbage to be ground, and thus improves the efficiency of garbage disposal.

For garbage feed transformation or organic composting, solids, such as metal, can, wooden chopstick, toothpick, plastic bag, etc. shall be sorted out from garbage before grinding the garbage with a garbage disposer. Currently, the solids in garbage are sorted out with conveyers installed at the front of the slot of a garbage disposer. That is, some workers in front of the conveyer sort out solids manually. Alternatively, magnets installed at the upper part of a conveyer sort out only magnetic substances, and non-magnetic substances are sorted out manually. In either system, a substantial amount of cost is involved, in the form of either personnel expenses for workers to sort out solids or initial equipment costs for a sorting device with magnets. Since garbage disposers themselves are not equipped with the capability to sort out solids, solids must be sorted out manually or semi-automatically. In addition, the unpleasant odor makes working in that environment difficult for extended periods

2) “Elimination of labor” is aimed at improving productivity, mechanizing

□ Problem to be solved and solution to the problem

The objective of the Subject Invention is to supply a garbage disposal unit (1) that can sort out solids for itself, when grinding garbage, without the need to sort out solids manually or semi-automatically; (2) that can improve the efficiency of grinding garbage; (3) and that can increase the ratio of active ingredients in organic composting by inhibiting fragments of small bone or fibers which will contribute to organic composting from being discharged, when grinding garbage and sorting and discharging solids.

To this end, the Subject Invention serves to sort and discharge solids, while garbage is being ground, with the rotatory power and centrifugal force of high-speed rotator blades and inducer, to increase the time during which the rotator blades pass long holes by replacing discharging holes on a perforated plate installed at the lower part of the grinding barrel with the long holes on a major axis to a diagonal direction to the rotating direction of the rotator blades, to improve the grinding efficiency through a scissoring effect and to inhibit the active ingredients of organic composting from being discharged by installing a rise and fall-type baffle plate that can be operated externally on a solid outlet.

The Subject Invention allows the omission of the step of sorting out solids manually or semi-automatically, which has been recognized as a preliminary step before grinding garbage, by modifying the front and back wall of the grinding barrel in the existing garbage grinders into vertical walls and by installing a solid sorting device that is composed of solid outlet at the end, ceiling slanted towards solid outlet and high-performance inducer. Accordingly, labor expenses are reduced and the initial equipment costs of purchasing a mechanical solid sorting device can be avoided. Also, the garbage grinding efficiency can be increased by extending the time that the discharging holes in a perforated plate contact the rotatory blades and by replacing them with long holes with an anticipated scissoring effect. Furthermore, since the Subject Invention can inhibit bone fraction, fibers, etc. which contribute to preventing the organic composting from being discharged when grinding garbage and sorting and discharging solids, it would contribute to the qualitative improvement of organic composting.

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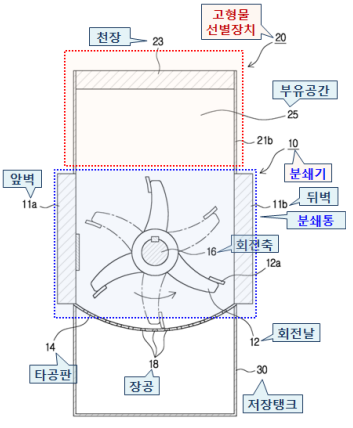
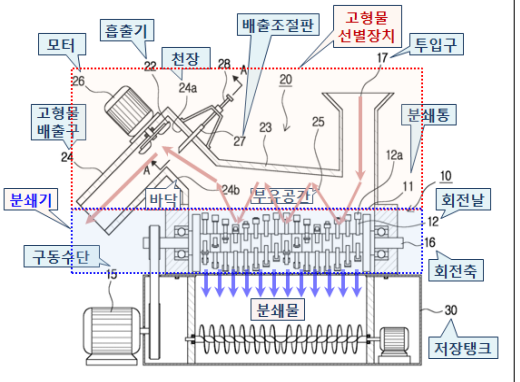
the work as much as possible in order to streamline processing in the production process and streamlining the workpiece transportation between the processes, and omitting the working requiring human power.

[Drawing 2] Cross-sectional view of garbage disposal unit	[Drawing 4] Longitudinal section of garbage disposal unit
	

천장	Ceiling
고형물 선별장치	Solid sorting device
부유 공간	Floating space
앞벽	Front wall
분쇄기	Grinder
뒤벽	Back wall
분쇄통	Grinding barrel
회전축	Axis of rotation
타공판	Perforated plate
장공	Long hole
회전날	Rotator blade
저장탱크	Storage tank

모터	Motor
흡출기	Inducer
천장	Ceiling
배출조절판	Baffle plate
고형물 선별장치	Solid sorting device
투입구	Slot
고형물 배출구	Solid outlet
분쇄통	Grinding barrel
분쇄기	Grinder
바닥	Bottom
부유공간	Floating space
회전날	Rotator blade
구동수단	Driving means
회전축	Axis of rotation
분쇄물	Ground matters
저장탱크	Storage tank

B. Invention for review (Appendix 2 in Plaintiff's Exhibit 1)

The invention for review relates to the “garbage disposal unit” that the Defendant uses. Its specifications and drawings shall be as

illustrated in the Appendix.

C. IPTAB Decision

1) On August 14, 2017, the Defendant argued, in the IPTAB, against the Plaintiff who was the patent holder of the Subject Invention to the effect that, since the composition and effect of the Invention for Review are different from Claims 1 through 3 of the Subject Invention, they would not fall under the scope of the protection of Claims 1 through 3. Thus, the Defendant petitioned for defensive scope of right confirmation for the Invention for Review.

2) In this regard, the IPTAB heard the Defendant's request for trial as 2017Dang2542 case, and on November 3, 2017, rendered its decision to grant the Defendant's request for trial to the effect that “since Claim 1 of the Subject Invention specifies that the back wall (11b) of the horizontal-type grinding barrel (11) shall be a vertical wall and that the floating barrel (21) shall have the ceiling (23) slanted towards the solid outlet (24), while the Invention for Review has a middle case (20) which has a step inside and whose front is composed of fixed wall (20) and emergency door (27) and an upper case (30) which has a horizontal ceiling (33), the composition and effect of the Invention for Review are different from Claim 1 of the Subject Invention and thus do not fall under the scope of protection of Claim 1. As a result, the Invention for Review also does not fall under the scope of protection of Claims 2 and 3, which are only dependent claims of Claim 1.” (Plaintiff's Exhibit 1)

2. Summary of Plaintiff's arguments

Though it can be viewed that the Invention for Review falls under the scope of protection of the Subject Invention for reasons stated below, the IPTAB decided otherwise. Thus, the IPTAB erred in its decision.

A. The vertical wall of grinding barrel (11) in Claim 1 is a concept that is contrasted to a slanted wall and means the front and back walls installed at the upper part of the perforated plate (14). In the Invention for Review, the back side of middle case (20) is a vertical wall and the emergency door (27) in the front and the fixed blade (52) with step structure are just additional members. Thus, the composition of the vertical wall in Claim 1 is identical to the front and back walls of the middle case (20) in the Invention for Review.

B. A person having ordinary skill in the art (hereinafter "PHOSITA") could easily devise to alter the floating barrel ceiling structure slanted towards an outlet in Claim 1 to a horizontal structure as in the Invention for Review. And in reality, the solids within a garbage grinder move towards an outlet due to the suction force of a discharging inducer. Thus, the solid discharge effects are practically the same, irrespective of the ceiling structure of a floating barrel. Therefore, the Invention for Review is equivalent with Claim 1.[3)]

3) Even if the Plaintiff seeks to revoke the IPTAB Decision as a whole to the effect that the Invention for Review does not fall under the scope of protection of Claims 1 through 3 in the Subject Invention, the Plaintiff does not argue specifically whether the Invention for Review falls under the scope of protection of Claim 2 and 3. Rather, the Plaintiff stated, in briefs dated March. 23, 2018, to the effect that the composition of Claims 2 and 3 is different from that of the Invention for Review.

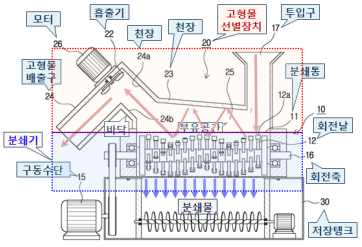
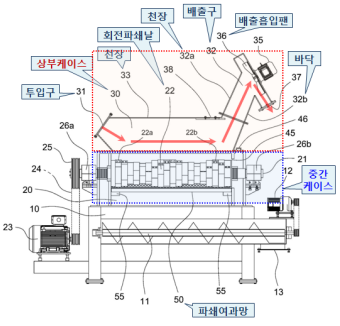
3. Whether the Invention for Review falls under the scope of protection of Claim 1

A. Element-by-element comparison

Element	Claim 1 (Plaintiff's Exhibit 4)	Invention for Review (Appendix)
1	A garbage grinder (10) whose bottom half is made of perforated plate (14) and with vertical front and back walls (11a, b) of horizontal type grinding barrel (11) installed with multiple rotator blades (12) and horizontal type axis of rotation (16) driven by driving means	- As illustrated in Drawing 1 and Drawing 2, the middle case (20) is installed at the upper part of lower case (10) and has a space to install an axis of grinding rotation (21) inside and a support member of the axis of grinding rotation (26a, 26b) to support both ends of the axis of grinding rotation (21). The axis of grinding rotation (21) is equipped with a number of rotating grinding blades (22) that continue to be installed along a longitudinal direction so that garbage input from the top can be ground. - A motor (23) is provided to drive the axis of grinding rotation (21). A belt (24) and a pulley (25) are driving means to deliver the rotatory power of the motor (23) to the axis of grinding rotation (21). - A grinding strainer (50) is installed with a number of grinding strainer supports (55) at the lower part of the axis of grinding rotation (21). - As illustrated in Drawing 1 and Drawing 2, the front of the middle

Element	Claim 1 (Plaintiff's Exhibit 4)	Invention for Review (Appendix)
		case (20) is installed at the upper part of the lower case (10). The middle case (20) is composed of the fixed wall (28) on which the fixed blade (52) of the grinding strainer (50) is installed and the emergency door (27) that is formed at the upper part of the fixed wall (28). - A horizontal member (53) formed in the grinding strainer (50) is installed perpendicularly to the vertical wall (20c) at the back side of the middle case (20). An escape member (60) is prepared over the horizontal member (53). Garbage that is not ground by the rotator grinding blade (22) would stay temporarily in the escape member (60). Foreign substances, etc. accumulated in the escape member (60) shall be removed manually when an inspection is performed and the take-out door (40) is opened.
2	Solid sorting device (20) with floating barrel (21) that secures a floating space[4] for solids with ceiling (23) slanted towards solid outlets (24) and is installed perpendicularly to the top of grinding barrel (11),	- As illustrated in Drawing 1 and Drawing 2, the upper case (30) is installed at the upper part of the middle case (20). On one side, a slot through which garbage is input is formed and, on the other side, the outlet (32)

4) In Claim 1, “securing a floating space (25) for solids with … ” is described.

Element	Claim 1 (Plaintiff's Exhibit 4)	Invention for Review (Appendix)
	with solid outlets (24) in which ceiling (24a) and bottom (24b) at the end of floating barrel (21) are slanted upward towards the direction to which solids are discharged and with solid discharge inducer (22) installed on the solid outlets (24).	is formed with an outlet channel through which air, light foreign substances and unpleasant odors generated when grinding garbage are discharged. The outlet (32) is formed so that its ceiling (32a) and bottom (32b) are slanted upward. On one side, an outlet suction fan (36) and a motor (35) are formed so that air, vapor, light foreign substance and bad smell are sucked out. The upper case (30) is formed between the slot (31) and the outlet (32). The ceiling (33) at the upper part of the axis of grinding rotation (21) shall be horizontal rather slanted.
Main Drawings	[Drawing 1]  	[Drawing 2] 

However, if the entire descriptions of Claim 1 are interpreted in a reasonable manner, the meaning thereof "securing a floating space (25) for solids and having …" and both parties also stated on May 16, 2018, the first trial date of this case, that there was no objection to such interpretation.

모터	Motor
흡출기	Inducer
천장	Ceiling
고형물 선별장치	Solid sorting device
투입구	Slot
고형물 배출구	Solid outlet
바닥	Bottom
부유공간	Floating space
분쇄통	Grinding barrel
분쇄기	Grinder
회전날	Rotatory blade
구동수단	Driving means
회전축	Axis of rotation
분쇄물	Ground matters
저장탱크	Storage tank

천장	Ceiling
회전파쇄날	Rotator grinding blade
천장	Ceiling
배출구	Outlet
배출흡입팬	Outlet suction fan
상부케이스	Upper case
투입구	Slot
바닥	Bottom
중간 케이스	Middle case
파쇄여과망	Grinding strainer

B. Analysis of commonalities and differences

1) Element 1

a) Element 1 of Claim 1 in the Subject Invention is substantially the same as the corresponding element of the Invention for Review in that they are both a garbage disposal unit (a garbage grinder) whose lower half is composed of perforated plates (grinding strainers)[5] and in which a number of rotator blades (rotator grinding blades) are installed and whose front and back walls of horizontal-type grinding barrel (middle case) equipped with a horizontal-type axis of rotation (axis of grinding rotation) driven by driving means are vertical

5) What is stated in the parentheses means an element of the Invention for Review, which corresponds to an element of Claim 1. Hereinafter, the Subject Invention and the Invention for Review shall be marked in such manner when they are compared with each other.

walls (fixed wall and emergency door at the front and vertical wall at the rear).

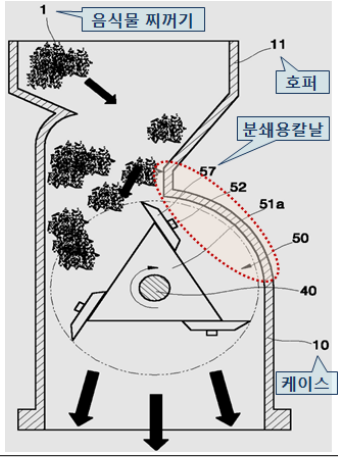
b) Discussion of the Defendant's arguments

The Defendant argued that the composition and effects are different in the corresponding elements of both inventions in that the vertical wall in Claim 1 is provided to enable solids to bounce, while in the Invention for Review, the front wall with the fixed blade (52) and the back wall with the escape member (60) are in a step structure and not the vertical wall, and the escape member (60) and the grinding inducing step (71) are provided to prevent solids from bouncing.

However, for the reasons stated below, it is reasonable to consider that the composition and effect of the front and back walls in Claim 1 are substantially the same as those of fixed wall and emergency door at the front wall and those of vertical wall at the back. Thus, the Defendant's arguments shall not be accepted.

① First, the Subject Invention specifies, in Claim 1, to the effect that the front and back walls of the horizontal-type grinding barrel (11) shall be a vertical wall to reduce the resistance to the bouncing of solids (refer to lines 6 through 9 on page 3 of Plaintiff's Exhibit 4). On the other hand, in some of the existing automatic garbage sorting grinding devices, the upper part of the case (10) is bent (or slanted), as illustrated in the drawing at the right below. It may be easy to anticipate that if the upper part is bent, the bouncing of solids may be obstructed. Thus, it may be understood that the vertical walls in Claim 1 are to prevent the resistance to solids bounced by bent or slanted walls. As such, it may be deemed that the objective of reducing the resistance to bouncing of solids through vertical walls in Claim 1 may be achieved by walls vertical to the direction in which solids bounce.

Drawing 7 in the Defendant's Exhibit 2

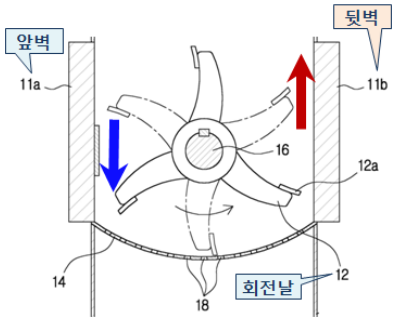
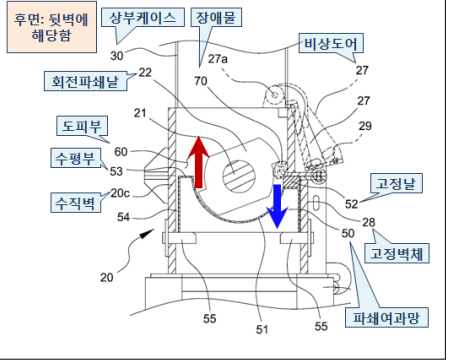


음식물 찌꺼기	Garbage
호퍼	Hopper
분쇄용 칼날	Grinding blades
케이스	Case

② On the other hand, as illustrated in Drawing 4 shown below, solids bounce to the back side of the middle case (20) in the Invention for Review. The back side will have the same composition and effect as those of the vertical wall of Element 1, in that the back side corresponds to the vertical walls (20c), and thus the back side will not prevent solids from bouncing to the upper part.

Also, the escape member (60) at the back side in the Invention for Review is formed at the upper part of the grinding strainer (50). Even if the specification of the Subject Invention specifies that it is desirable not to have a step within the vertical walls (refer to lines 21 and 22 on page 3 of Plaintiff's Exhibit 4), Claim 1 specifies that the front and back walls (11a, b) of the horizontal-type grinding barrel (11) are only vertical walls. In light of the fact that there is no limit to the steps within the vertical walls, binding structure between the perforated plate (14) and front and back walls (11a, 11b) or the left

and right side of upper structure of the perforated plate (14), the escape member (60) of the Invention for Review must be viewed as an additional member to limit the upper structure of the grinding strainer (50). In other words, if the perforated plate (14) as illustrated in Drawing 2 of the Subject Invention is replaced by the grinding strainer (50) as illustrated in Drawing 4 of the Invention for Review, the escape member as in the Invention for Review may be formed in Claim 1. Moreover, since the garbage grinder is normally filled with garbage to a certain level or higher, it seems that the existence of the escape member (60) would not obstruct the bouncing of solids.

Excerpt from Drawing 2 in the Subject Invention	Drawing 4 of the Invention for Review
	

앞벽	Front wall
회전날	Rotator blade

후면: 뒷벽에 해당	Back wall: corresponds to the other side wall
상부 케이스	Upper case
장애물	Obstacle
비상도어	Emergency door
회전 파쇄날	Rotator grinding blade
도피부	Escape member
수평부	Horizontal member
수직벽	Vertical wall
고정날	Fixed blade
고정벽체	Fixed wall
파쇄여과망	Grinding strainer

③ Furthermore, in the Invention for Review, the fixed wall (28) in the front of the middle case (20) is a vertical wall. Also, the emergency door (27) at the upper front part is formed as a vertical wall and opens only in case of emergency, so that garbage is not discharged to the outside when the Invention for Review operates normally. Ultimately, the front of the Invention for Review is formed with vertical walls as a whole and the fixed blade (52) and the grinding inducing step (71) at the front are only an additional part to the vertical wall to facilitate the grinding of garbage. Moreover, the front of the middle case (20) is not related to the bouncing of solids.

2) Element 2

On the other hand, Element 2 of Claim 1 is the same as the corresponding element of the Invention for Review in that they are both solid sorting devices (1) which secure a floating space for solids, are equipped with ceilings and are composed of floating barrel (upper case) installed perpendicularly to the upper part of the grinding barrel (middle case), (2) solid outlet (outlet) whose ceiling and bottom are slanted upward to the solid discharge direction at the end of floating barrel (upper case) and (3) solid discharge inducer (outlet suction fan) installed at the solid outlet (outlet)

However, they are different in that the ceiling of the floating barrel in Element 2 is slanted towards the solid outlet (24), while the ceiling of the upper case is horizontal in the corresponding element of the Invention for Review.

C. Analysis of differences

However, there are marked differences between problem solution principles and effects in both inventions due to differences that exist between Element 2 in Claim 1 and corresponding elements in the

Invention for Review. Thus, it may not be deemed that Element 2 in Claim 1 and corresponding elements in the Invention for Review are the same, for the reasons stated below.

1) Relevant laws

To deem that the Invention for Review compared to a patented invention falls under the scope of protection of the patented invention, each element specified in the claims of the patented invention and the close joint relationship among such elements shall be included in the Invention for Review. On the other hand, if the Invention for Review even modifies the composition specified in the claims of a patented invention, it shall be considered that the Invention for Review falls under the scope of protection of the patented invention, as the Invention for Review is the same as the composition specified in the claims of the patented invention without special circumstances; provided, however, that the problem solution principles in both inventions are the same and that said modification generates effects that are substantially the same as the patented invention and a PHOSITA can come up with said modification without difficulties. Furthermore, when determining whether the problem solution principles are the same in both inventions, this shall be done rather than by formally extracting a part of composition specified in claims, from the core of technical ideas on which the solution of a patented invention is based in light of statements of description of invention in the specification, prior art, etc. (refer to Supreme Court Decision 2012Hu1132 rendered on July 24, 2014).

2) Analysis

a) Principles for solution to the problem

① According to statements in the specification of the Subject Invention (Plaintiff's Exhibit 4) shown below, Claim 1 adopts the ceiling of the floating barrel in Element 2 which is slanted upward

towards the solid outlet as a technical means to solve a problem of discharging solids more efficiently. The core technical idea on which this solution to the problem is based is to mechanize the discharge of solids by forcibly discharging solids bounced near a solid outlet with an inducer, as the solids are bounced with the centrifugal force of rotator blades (12) with the ceiling of floating barrel (21) slanted upward towards the solid outlet (24) from the slot (17), and the ceiling acts as a reflector so that solids can be moved forward and transferred successively.

The objective of this invention is to supply a garbage disposal unit that can sort out solids for itself, when grinding garbage, eliminating the need to sort out solids manually or semi-automatically (refer to lines 15 through 16 at the bottom of page 2).
The first solution here can be achieved with a garbage grinder to which a device that can automatically sort out solids is added and in which garbage is ground and moves towards a solid outlet as it bounces, by the centrifugal force of the rotator blade, to the floating barrel installed at the upper part of grinding barrel and falls from the ceiling and in which light solids such as vinyl, etc. are floating in the mooring space on the wind inside and are induced to the outside by a high performance inducer installed at the solid outlet (refer to lines 4 through 8 at the bottom of page 2).
The ceiling (23) would act as a reflector that induces solids that bounce from the grinding barrel (11) to fall towards the direction that garbage proceeds. ...(omitted)... The solids can be transferred successively by forming the upper part of front and back walls (21a, b) so that the ceiling (23) is slanted upward towards the solid outlet (24) and by inducing them to bounce with the centrifugal force of rotator blades (12), hit the ceiling (23) and fall in front of the direction in which the garbage proceeds, i.e. towards the solid outlet (24) (refer to lines 23 through 31 on page 3).
Light solids are forcibly discharged to the outside by the powerful induction force of the inducer (22) through the solid outlet (24). Other solids are not promptly discharged to the solid outlet (24) due to their weight, and slowly move towards the solid output (24) through a series of bounces and with the ceiling (23) slanted towards the solid output (24). Only when the solids move near the solid outlet (24) are they forcibly discharged to the outside by the inducer (22) (refer to lines 1 through 4 on page 4).

② On the other hand, in the Invention for Review, the ceiling of the upper case is not slanted upward but is horizontal. Also, the Invention for Review does not contain a technical idea that can act as a reflector to induce the solids, where solids that bounce by the rotator grinding blades (22) hit the ceiling, to fall at the front of direction in which garbage proceeds.

③ Comparing Claim 1 with the core of technical ideas for each unique solution to the problem in the Invention for Review, it can be seen that the principle of solution to the problem of Claim 1 in relation to Element 2 is different from that in the Invention for Review.

b) Effects

① Also, in Claim 1, as the ceiling of the floating barrel (21) is slanted upward towards the outlet, solids that bounce due to the centrifugal force of the rotator blade (21) hit the ceiling and fall at the front. Thus, solids would be transferred forward faster than they would be transferred forward by the rotator grinding blade with a spiral structure.

② On the other hand, since the ceiling of the upper case in the Invention for Review is horizontal, solids that bounce and hit the ceiling would fall where they were. Thus, solids would be transferred forward at the same speed as they would be transferred forward by the rotator grinding blade with a spiral structure.

③ Thus, it may be deemed that Claim 1 is substantially different from the Invention for Review in terms of the effects in relation to the discharge speed of solids.

D. Summary of analysis

On comprehensive consideration of the matters examined above, Element 2 of Claim 1 in the Subject Invention is different from the

corresponding elements in the Invention for Review, and it may not be considered that both inventions are equal. Thus, the Invention for Review does not fall under the scope of protection of Claim 1.

4. Whether the Invention for Review falls under the scope of protection of Claims 2 and 3

Claims 2 and 3 of the Subject Invention are dependent claims that contain all elements of Claim 1. Thus, as long as it is deemed that the Invention for Review does not fall under the scope of protection of Claim 1, the Invention for Review does not fall under the scope of protection of Claims 2 and 3.

5. Conclusion

As such, since the Invention for Review does not fall under the scope of protection of Claims 1 through 3 in the Subject Patented Invention, the IPTAB decision is consistent with the above analysis and shall be upheld. The Plaintiff's petition to revoke the IPTAB decision is without merits.

Presiding Judge Kyuhong LEE
Judge Sungyop WOOO
Judge Jinhee LEE

[Appendix] Specifications and Drawing of the Invention for Review

1. Title of the Invention for Review

Garbage grinder

2. Brief description of drawings for the Invention for Review

[Drawing 1] : Front view of garbage grinder according to the Invention for Review

[Drawing 2] : Cross-section of garbage grinder in Drawing 1

[Drawing 3] : Perspective view of grinder strainer in Drawing 2

[Drawing 4] : Cross-section of middle case in Drawing 1

[Drawing 5] : Perspective view of axis of grinding rotation in Drawing 2

3. Detailed description of the Invention for Review

The Invention for Review relates to a grinder of garbage. In particular, the Invention for Review relates to a grinder of garbage that can grind garbage efficiently, while venting out the air, vapor, light foreign substance and bad smells which are generated when grinding garbage.

To this end, the garbage grinder under the Invention for Review is composed of a lower case (10), middle case (20) and upper case (30), as illustrated in Drawing 1.

Said lower case (10) is installed at the lower part of the grinder as

illustrated in Drawing 1 and Drawing 2. A space member is formed within the lower case (10) so that the transfer conveyor (11) can be accommodated. The transfer conveyor (11) receives ground wastes that fall from the upper part and discharges them to the outside. The unexplained mark 12 is a motor to drive the transfer conveyor (11) and the unexplained mark 13 is a waste outlet.

Said middle case (20) is installed at the upper part of the lower case (10) as illustrated in Drawing 1 and Drawing 2. An equipment member is formed within the middle case (20) so that the axis of grinding rotation (21) can be accommodated. The supports (26a, 26b) for the axis of rotation are formed at both ends of the axis of grinding rotation (21) so that said both ends can be supported. The axis of grinding rotation (21) is equipped with a number of rotating grinding blades (22) that continue to be installed along a longitudinal direction so that garbage input from the top can be ground.

Said rotating grinding blades (22) continue to be installed on the axis of grinding rotation (21) along a spiral direction. However, the rotator grinding blades (22b) of the axis of grinding rotation (21) installed at the support (26b) for the axis of rotation on one side of the middle case (20) – for example, 3 grinder blades (22b) at the right end as illustrated in Drawing 5 – are installed in a reverse-spiral direction. The rotator grinding blades (22b) installed in a reverse-spiral direction will prohibit garbage that is transferred to a spiral direction from being transferred in a forward direction. The unexplained mark 45 is an outlet through which garbage that remains on the rotator grinding blades (22b) is discharged indirectly, when said garbage is not ground by the rotator grinding blades (22b). The unexplained mark 46 is an outlet inspection hole with which the outlet (45) can be inspected. The unexplained mark 23 is a motor to drive the axis of grinding rotation (21). The unexplained marks 24 and 25 are a belt and a pulley, respectively. They are driving means that deliver a rotatory power to the axis of grinding rotation (21)

The grinding strainer (50) is installed at the lower part of said

rotator grinding blades (22) with a number of grinding strainer supports (55). The grinding strainer (50) has a number of circular straining holes (51) to filter ground matters that fall under the upper part, as illustrated in Drawing 3. On one side, the fixed blade (52) is formed along a longitudinal direction and it grinds the garbage with the axis of the rotating blade (22) installed on the axis of grinding rotation (21) as illustrated in Drawing 4. On the other side, the horizontal member (53) is formed along a longitudinal direction and the escape member (60) is formed at the upper part so that garbage can remain temporarily.

As explained above, since the grinding strainer (50) in which the fixed blade (52) and the horizontal member (53) are formed is installed at the center of the middle case (20) with a number of grinding strainer supports, the middle case (20) of the Invention for Review will have a step structure inside.

In other words, the front of said middle case (20) is installed at the upper part of the lower case (10) as illustrated in Drawings 1 and 4. The inside of said middle case (20) is composed of the fixed wall (28) on which the fixed blade (52) of the grinding strainer (50) is installed and the emergency door (27) that is formed at the upper part of the fixed wall (28).

Said emergency door (27) is combined by a pair of hinges (27a) installed at the upper part of the middle case (20) so that the emergency door can be opened and closed. The lower part of the emergency door (27) will be combined by a number of bolts (29) at the upper part of the fixed wall (28), as illustrated in Drawing 1. The groove member (29a) is formed at the center of bolts (29). Where the groove member (29a) is fractured by external force or shock, the emergency door (27) is opened along the dotted lines in Drawing 4. If the emergency door (27) is opened, the axis of grinding rotation (21) will be stopped by safety devices, which are not included in the illustrations.

At the back side of said middle case (20), the horizontal member

(53) that is formed at the grinding strainer (50) is installed perpendicularly to the vertical wall (20c) and the escape member (60) is prepared over the horizontal member (53). The garbage that is not ground by the rotator grinding blade (22) temporarily remains in the escape member (60) and the foreign substances, etc. which are accumulated in the escape member (60) are removed manually, when an inspection is performed and a take-out door (40) is open.

Said upper case (30) is installed at the upper part of the middle case (20) as illustrated in Drawings 1 and 2. On one side, a slot (31) through which garbage is input is formed, and on the other side, the outlet (32) is formed with an outlet channel through which air, light foreign substances and bad smells generated when grinding garbage are discharged. The outlet (32) is formed so that the ceiling (32a) and the bottom (32b) are slanted upward. On one side, the outlet suction fan and the motor (35) are formed so that air, vapor, light foreign substances and bad smells are sucked out. The ceiling (33) formed between the slot (31) and the outlet (32), i.e. the ceiling (33) located at the upper part of the axis of grinding rotation (21), is not slanted but horizontal. Also, the ceiling (33) does not act as a reflector to induce the solids that bounce from the axis of grinding rotation (21) to proceed towards the outlet (32). Additionally, the outlet (32) is not equipped with, at the ceiling, the rise and fall-type baffle plate that can be operated externally to adjust the discharging width of solids.

On one side of said upper case (30), the inspection and take-out door (40) is installed to inspect the internal state and take a measure as illustrated in Drawing 1. Where the axis of grinding rotation (21) is overloaded, anomalies occur or foreign substances are accumulated at the upper part of the axis of grinding rotation (21), the internal state of the upper case (20) shall be inspected, anomalies shall be resolved or the foreign substances shall be removed after opening the inspection and take-out door (40). The unexplained mark 37 is an outlet that discharges air, vapor, light foreign substances and bad smells.

In the garbage grinder under the Invention for Review as explained

above, once the garbage is input into the inside of the upper case (30) through the slot (31), the input garbage is ground between the rotator grinding blades (22a) of the axis of grinding rotation (21) installed at the middle case (20) and the fixed blades (5) installed at the grinding strainer (50), and then falls to the lower part. At this time, part of the garbage is ground as soon as it is input and another part of the garbage is ground gradually, as it is transferred along the spiral direction formed on the rotator grinding blades (22a) of the axis of grinding rotation (21) to a longitudinal direction and the rest of the garbage will continue to be transferred and reach the rotator grinding blades (22b) formed along the reverse-direction. Thus, the garbage would no longer be transferred to a forward direction due to the rotator grinding blades (22b) formed along the reverse-direction, and would be ground up. Nevertheless, once garbage is flooded to the upper part of the rotator grinding blades (22b), it would be discharged through the output (45).

As stated above, in the Invention for Review, the garbage is ground immediately between the rotator grinding blades (22a) of the axis of grinding rotation and the fixed blades (52) installed at the grinding strainer (50), or is ground and falls below as it is transferred towards a longitudinal direction. The ground-up material that falls drops to the lower case (10) through the straining hole (51) and then is discharged to the waste outlet (13) by the transfer conveyor (11) installed at the lower case (10). Air, vapor, light foreign substances, bad smells, etc. generated in the course of garbage grinding are sucked into the outlet (32) and discharged to the outside by the outlet suction fan (36) installed on one side of the upper case (30).

As stated above, as the axis of grinding rotation (21) rotates, the ground-up material that has been ground between the rotator grinding blade (22) and the fixed blades (52) continues to be discharged to the lower part and the air, vapor, light foreign substances, bad smells, etc. generated in the course of garbage grinding continue to be sucked into the outlet (32) at the upper part and discharged to the outside by the

outlet suction fan (36) installed on one side of the upper case (30). In the course of this, the garbage that is not ground between the rotator grinding blade (22) and the fixed blades (52) is accumulated at the upper part of the axis of grinding rotation (21). The accumulated garbage is kept in the escape member (60) formed at the back side of the middle case (20) by the horizontal member (53) of the grinding strainer (50). The foreign substances, etc. accumulated in the escape member (60) shall be removed manually when an inspection is performed and a take-out door (40) installed at the upper case (60) is opened.

On the other hand, where the garbage contains heavy foreign substances, such as stone, iron pieces, etc. and the heavy foreign substances are not ground in the course of the operation of the axis of grinding rotation (21), abnormal noises may be generated within the grinder and overloads may be caused in the axis of grinding rotation (21).

Initially, where abnormal noises are generated within the grinder by stone, steel pieces, etc., users shall manually remove the foreign substances that generate the noises by shutting down the garbage grinder and opening the inspection and take-out door (40) installed at the upper case (30).

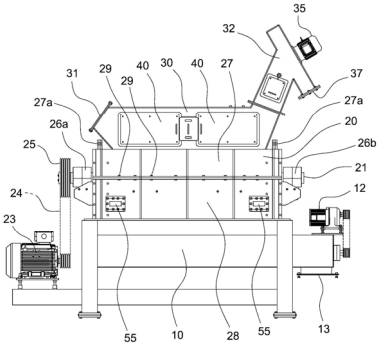
Then, where the axis of grinding rotation (21) is overloaded, the obstacles (70), such as stone or metal pieces, are not ground between the rotator grinding blades (22) and the fixed blades (52). Where the obstacles (70) are stuck between the rotator grinding blades (22) and the fixed blades (52) as illustrated in Drawing 4, they cause impact on the inside of the emergency door (27). As the impact is transferred to the bolts (29), the groove member (29a) is fractured by the impact and the emergency door (27) is opened along the dotted lines as shown in Drawing 4. If the emergency door (27) is opened, the axis of grinding rotation (21) will be stopped by safety devices (not pictured). Thus, damage to the axis of grinding axis (21) is prevented, and measures can be taken by opening the emergency door (27) and then manually

removing foreign substances, etc. (70) which are the reason for shutdown.

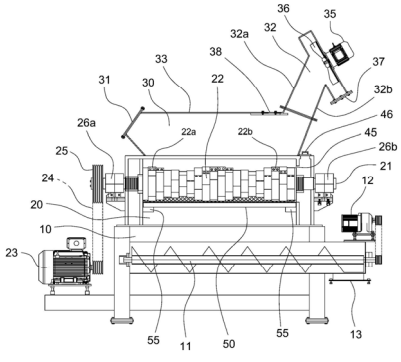
In short, where the garbage contains heavy stone, metal pieces, etc., the garbage grinder under the Invention for Review does not automatically discharge them through an outlet (32) by the outlet suction fan (36) but grinds most of them between the rotator grinding blades (22) and the fixed blades (52). Where the garbage that contains heavy stone, metal pieces, etc. is not ground, it shall be removed manually. In other words, where said stones, metal pieces, etc. generate noises within the grinder, users shut down the grinder and manually remove said stones, metal pieces, etc. by opening the inspection and take-out door (40). Where said stones, metal pieces, etc. cause the emergency door (27) to be opened due to the impact, the emergency door (27) shall be open completely and said stones, metal pieces, etc. shall be removed. Where the garbage that contains said stones, metal pieces, etc. is accumulated in the escape member (60) to a certain level or higher up to the upper part of the axis of grinding rotation (21), users shall open the inspection and take-out door (40) installed at the upper case (30) and manually remove the accumulated foreign substances.

4. Drawings of the Invention for Review

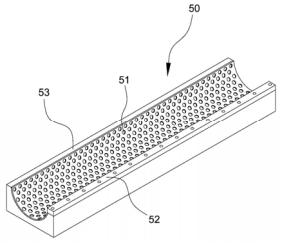
[Drawing 1]



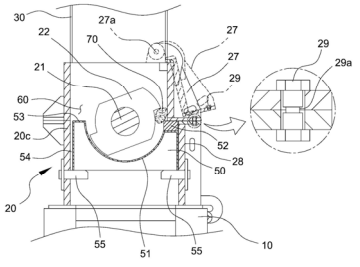
[Drawing 2]



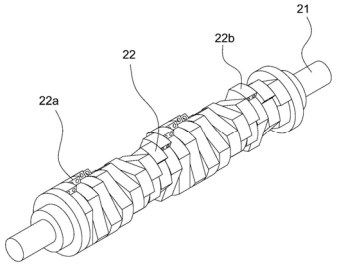
[Drawing 3]



[Drawing 4]



[Drawing 5]



<The End>

PATENT COURT OF KOREA
THIRD DIVISION
DECISION

Case No.: 2017Heo3522 Rejection (Patent)

Plaintiff: Virginia Commonwealth University
United States of America

Defendant: Commissioner of the Korean Intellectual Property Office

Date of Final Trial: May 9, 2018

Decision Date: June 29, 2018

ORDER

1. The IPTAB Decision 2016Won2781 dated April 24, 2017 shall be revoked.

2. The cost arising from this litigation shall be borne by the defendant.

PLAINTIFF'S DEMAND

As ordered.

OPINION

1. Background

A. Plaintiff's Claimed Invention at Issue (Plaintiff's Exhibit 2)

1) Title of Invention: Induction of tumor hypoxia for cancer therapy

2) International Filing Date/Date of Claimed Priority/Translation Filing Date/Application No.: April 8, 2009 / April 10, 2008 / November 8, 2010 / No. 10-2010-7025113

3) Claims (As amended on May 24, 2016)

[Claim 1] A kit to treat tumors in mammals, where said kit includes tirapazamine, embolic agent, and explanatory documents that include administration information that embolic agent is administered after tirapazamine, and said embolic agent is supplied to the tumor and embolizes the vasculature, and the embolic agent is selected from at least one of the following: Lipiodol, Gelfoam, blood clot, and nanoparticles.

[Claims 2, 9, 10, 20, and 22-24] Deleted.

[Claim 3] A kit to treat tumors in mammals ("Element 1"), where said kit includes stilbene and tirapazamine ("Element 2"), and explanatory documents that include administration information that stilben is administered after tirapazamine ("Element 3"), and said stilbene is a microtubule polymerization inhibitor ("Element 4").

[Claims 4-8, 11-19, and 21] Deleted.

4) Main Content and Drawings

1 Technical Field and Background Art

The Claimed Invention is about a composition that increases the capacity of hypoxia-activated bioreductive agents, which generally kill tumor cells of solid tumors and a method thereof. In particular, to activate hypoxia-activated bioreductive agents in the local hypoxic area of tumors or tumor-contained area and increase the killing of tumor cells using reductive agents, the Claimed Invention provides a composition and method to produce the above local areas.

Tumor growth requires the network development of new blood vessels to supply oxygen and nutrients as well as remove toxic metabolites. New blood vessels in the tumor are prominently different from normal vasculature. ···(omitted)··· Targeting tumor vasculature has evolved into a useful strategy to develop a new cancer therapy. Currently, two approaches are used for targeting tumor vessels. One is to prevent new angiogenesis by blocking angiogenesis factors or their receptors, thereby blocking angiogenesis processes. Such a therapy is represented by bevacizumab, which is a monoclonal antibody of vascular endothelial growth factor (VEGF), or sorafenib or sunitinib, small molecular inhibitors of VEGF receptor tyrosine kinase. A second strategy regarding tumor vasculature targeting is to kill the preexisting endothelial cells of tumors directly. Such compounds are called vascular disrupting agents (VDA). The objective is to induce tumor ischemia and tumor necrosis by killing the endothelium of the preexisting tumor vessels, thereby blocking sufficient blood supply to the tumors. Such agents are represented by various, small molecules such as combretastatin A4(CA4), ZD6126, AVE8062, Oxi4503, and stilbene derivatives. These small molecules kill tumor endothelial cells by interfering with microtubule polymerization at the colchicine site. Various colchicine-site microtubule inhibitors are currently being developed as VDA.

The main topic of tumor vessel-targeting agents, including angiogenesis inhibitors and vascular disrupting agents, is removing blood supply to the tumor cells and inducing a hypoxic state in tumors, thereby inducing necrosis. Thus, the occurrence of a hypoxic state is an essential requirement to kill tumor cells. However, regarding the hypoxic state of tumors, the hypoxic responses of hypoxic tumor cells show, for instance, the stabilization of Hypoxia-Inducible Factor (IIIF) 1-α, so that cell necrosis cannot be induced sufficiently. ....(omitted)... Thus, such compensatory mechanisms can produce drug resistance for angiogenesis inhibitors and

VDA.
Tirapazamine (SR 4233; 3-amino-1,2,4-benzotriazine-1,4-di-N-oxide) is an anticancer agent only in a hypoxic environment and a tested bioreductive agent. Tirapazamine is activated by cytochrome P450 reductase through 1-electron reaction, and nitroxide radicals are produced. Under an oxygen-free environment, nitroxide radicals induce cell necrosis by causing the destruction of single- and double-stranded DNA. Because of such characteristics, tirapazamine has toxicity that is 15 to 200 times greater in hypoxic cells compared with sufficiently oxygenated cells. The above agents are radiation sensitizers, and in cancer treatment, they work synergistically with platinum compounds.

[2] Problem to Solve and Solution to the Problem
It is necessary to provide improved cancer treatment continuously and, in particular, it is desirable to provide a cancer treatment protocol using publicly known agents optimizing the efficacy and minimizing the toxic adverse effects.
The basis of the Claimed Invention is the development of a method and composition to increase antitumor activity using the hypoxia-activated bioreductive agent (HABA) by decreasing or minimizing adverse effects that may occur because of the systemic administration of the above agent. Under oxygen, HABA is the inactive prodrug, and the above drug is activated only in the hypoxic condition. The Claimed Invention administration strategy includes inducing a hypoxic state in the local area (e.g., inside the tumor or area containing the tumor) where HABA activation is preferred. If HABA exists in the local hypoxic area, HABA becomes activated and kills cells (e.g., tumor cells) in the above area without causing a harmful systemic effect on the organism.
The above method includes embolization, vascular disrupting agent, and individual or combined angiogenesis inhibitor. This method induces the tumor cell necrosis by combining with the administration of the hypoxia-activated bioreductive agent, which becomes activated only in the hypoxic area. As systemic toxicity is minimized, the maximum advantage will be obtained.

[3] Details to Conduct the Invention
Combination of the hypoxia-activated bioreductive agent with the vascular disrupting agent (VDA): In another embodiment of the Claimed Invention, the hypoxia-activated bioreductive agent was used in combination with the

VDA that induces hypoxic state. VDAs that can be used for conducting the Claimed Invention are, in a nonrestrictive way, combretastatin derivatives ...(omitted)... stilbene derivatives (e.g., cis-3,4‘,5-trimethoxy-3’-aminostilbene(5c), ...(omitted)...). While the administration of tirapazamine, stilbene 5c, or VDA alone induces 10% or 20% of tumor necrosis, the combination of tirapazamine with stilbene 5c induces a tumor necrosis increase by up to 70% or 80%.

4 Effects
The local hypoxic area is created inside the tumor or in the area that contains the tumor, and the activation of the hypoxia-activated bioreductive agent (e.g., tirapazamine) in the above local area is increased. By promoting the destruction of DNA strands in tumor cells, the activated hypoxia-activated bioreductive agent destructs tumor cells in the hypoxic area. As the above activation is localized, the occurrence of adverse effects that typically occur due to systemic administration of the bioreductive agent is reduced.

B. Prior Arts[1)]

1) Prior Art 1 (Defendant's Exhibit 3)

It is a research paper entitled “COMBINING BIOREDUCTIVE DRUGS (SR 4233 or SN 23862) WITH THE VASOACTIVE AGENTS FLAVONE ACETIC ACID OR 5,6-DIMETHYLXANTHENONE ACETIC ACID” that was published in 「International Journal of Radiation Oncology Biology Physics (Vol. 29, No. 2)」 in 1994. The main contents are as below.

1 Purpose
Prior Art 1 aims to determine whether a potent analog of flavone acetic acid (FAA) (5,6-dimethylxanthenone acetic acid (DMXAA)) inhibits blood flow

1) Prior Arts are actually research papers, but to compare with the Claimed Invention, they are called “invention.”

in mouse mammary tumors and to assess whether DMXAA enhances the antitumor effects of tirapazamine (SR 4233) and the novel bioreductive drug SN 23862.

2 Results

Administration of DMXAA (65-70 μmol/kg) resulted in the inhibition of tumor blood flow to approximately 25% of control values, with no recovery observed up to 36 h posttreatment. The combination of DMXAA with SR 4233 provided a significant increase in tumor growth inhibition relative to either drug alone. In this effect, DMXAA was qualitatively similar to FAA but was approximately 10 times more potent. The interaction between DMXAA (65 μmol/kg) and SR 4233 (200 μmol/kg) was maximal, with SR 4233 given between 15 min before and 60 min after DMXAA.

3 Conclusion

DMXAA is a potent inhibitor of blood flow in MDAH-MCa-4 tumors. A combination of this vasoactive drug with bioreductive agents leads to an enhanced antitumor effect.

The combination of DMXAA with SR 4233 or SN 23862 provided a significant increase in tumor growth inhibition as shown in [Figure 3]. The data showed that the most optimal time for SR 4233 administration was between 15 min before and 60 min after DMXAA.

[Figure 3]

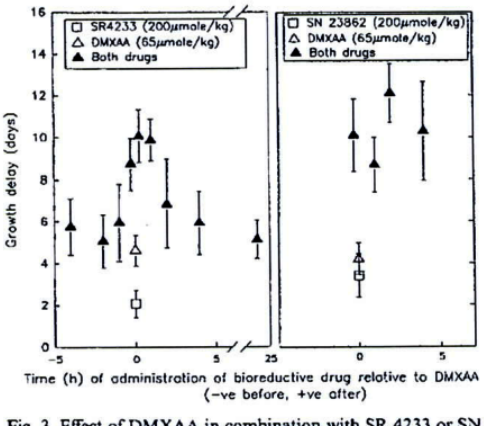


Fig. 3. Effect of DMXAA in combination with SR 4233 or SN 23862 on tumor growth delay. Values are arithmetic means ± SE, n = 5-7. For SN 23862 results are pooled from two separate experiments.

2) Prior Art 2 (Defendant's Exhibit 4)

It is a research paper entitled "*cis*-3,4',5-Trimethoxy-3'-aminostilbene disrupts tumor vascular perfusion without damaging normal organ perfusion" that was published in 「Cancer Chemotherapy and Pharmacology (Vol. 63)」, an online periodical journal, on March 26, 2008. The main contents are as below.

[1] Introduction

Targeting tumor vasculature has evolved into a useful strategy for the development of new cancer therapy. One of the strategies is to kill the preexisting endothelial cells of a tumor directly. Such a compound is named vascular disrupting agent (VDA), and the objective of such a compound is to kill tumor endothelial cells and cause tumor ischemia and necrosis by blocking sufficient blood supply to the tumor. Colchicine site inhibitors, including combretastatin A4(CA4), ZD6126, AVE8062, and Oxi4503, kill tumor endothelial cells by interfering with microtubule polymerization. Unlike vinca alkaloid, which has an antiangiogenic effect until it reaches the maximum tolerated dose, its antiangiogenic effect is achieved at a dose that is only 1/10 of the maximum tolerated dose. Other small molecules, such as flavonoid DMXAA, induce the local release of TNFα or other cytokines from activated macrophages to damage tumor vessels.

[2] Purpose

Targeting tumor vasculature by colchicine-site microtubule inhibitors is a new approach to cancer therapy. Prior Art 2 investigates cis-3, 4', 5-trimethoxy-3'-aminostilbene (stilbene 5c) in its effect on tumor vascular perfusion, pharmacokinetics, toxicity, and therapeutic efficacy in a mouse xenograft model.

[3] Results

1) Stilbene 5c selectively suppresses tumor perfusion without damaging normal organ perfusion in DCE-MRI studies. Histological sections of normal organs treated with stilbene 5c do not reveal any major toxicity in H&E staining. Microvascular density determined by CD34 staining is unchanged in normal organs but significantly decreased in tumors after stilbene 5c treatment. Biodistribution study shows that stilbene 5c is not detectable in heart and lung, rapidly decreased in brain, liver, and kidney, but remains high in the tumor for more than 3 h after IV

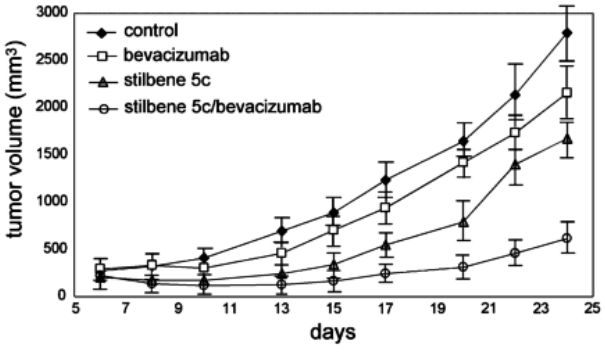
injection of stilbene 5c, thus suggesting preferential accumulation in tumor.

2) Efficacy of stilbene 5c on tumor growth in a mouse xenograft model: in vivo efficacy of stilbene 5c was studied using UCI-101 cells of ovarian cancer. First, 25 mg/kg of stilbene 5c was injected into the peritoneal cavity three times per week. Tumor volumes were calculated using the major and minor axes. Unfortunately, we could not see any difference in the tumor growth between the control group and group treated with stilbene 5c (not indicated). ···(omitted)··· To obtain a better therapeutic efficacy, the frequency of stilbene 5c treatment was increased to five consecutive days (Monday to Friday) for two weeks (20 mg/kg per day) because the half-life of stilbene 5c is 1.8 hours. Subsequently, 10 mg/kg of bevacizumab was administered five times (two times per week on Mondays and Fridays). The group of stilbene 5c alone showed about 45% tumor growth suppression, and the group of bevacizumab alone showed about 25% tumor growth suppression. The group of stilbene 5c combined with bevacizumab showed 80% tumor growth suppression (see [Figure 7]). On the 24th day after dissecting the tumor, the measured tumor weight was confirmed (not indicated). This study draws two conclusions. Stilbene 5c is more effective if it is administered more frequently, and stilbene 5c is even more effective if it is administered in combination with bevacizumab, which is an angiogenesis inhibitor.

4 Conclusion

Stilbene 5c is a useful vascular disrupting agent, and in combination with bevacizumab, it may be a promising therapy for cancer.

[Figure 7]



In vivo, stilbene 5c can improve the effect of bevacizumab. UCI-101 cells were injected into nude mice subcutaneously, and mice were treated with 20 mg/kg per day of stilbene 5c from Monday to Friday, in combination or without the combination of bevacizumab 10 mg/kg twice per week. Tumor volumes were calculated using the major and minor axes. Each group had eight mice, and the average tumor volume and standard deviation were shown based on the number of days.

C. IPTAB Decision

1) Regarding the Claimed Invention of the plaintiff, the Korea Intellectual Property Office (the "KIPO") examiner notified on October 7, 2015 that "In the Claimed Invention, regarding Claims 3-10 and 13-22 lack an inventive step as a person having ordinary skill in the art to which this invention belongs (hereinafter referred to as "a skilled person") would have easily derived the invention from Prior Arts 1 and 2. Also, in the detailed description of the invention, only the combination effects of tirapazamine with stilbene 5c are written, but such a statement cannot represent the combination effects of stilbene derivatives with tirapazamine. Moreover, there is no information on a pharmacological study regarding the administration of tirapazamine and embolic agents. Therefore, in the Claimed Invention, Claims 1-22 are not supported by the detailed explanation of the invention. Furthermore, in the Claimed Invention, Claims 1-22 have an error of insufficient description. Thus, in accordance with Article 29(2) and Article 42(4)(i)-(ii) of the old Patent Act (the Act prior to amendment by Law No. 12753 on June 11, 2014; hereinafter referred to as "the old Patent Act"), the Claimed Invention cannot be patented (Plaintiff's Exhibit 4)".

2) On January 7, 2016, the plaintiff submitted an amendment and written argument accompanied by a specification, etc. in which Claims 2, 7-10, 12, 17, and 22 were removed, and Claims 1, 3-6, 11, 13-16, and 18-21 were amended in the Claimed Invention (Defendant's Exhibit 2). However, on February 5, 2016, the KIPO examiner still rejected the application because the grounds for rejection still remained, i.e. lack of inventive step for Claims 3-6, 13-16, and 18-21 amended on January 7, 2016 and failure to meet the support requirement for Claims 1, 3-6, 11, 13-16, and 18-21 amended on January 7, 2016 (Plaintiff's Exhibit 5).

3) On May 11, 2016, regarding the above rejection of the KIPO, while the plaintiff made a petition to appeal to the IPTAB, the plaintiff made amendments for reconsideration by the examiner before trial regarding the claim construction on May 24, 2016. However, on June 14, 2016, the KIPO examiner rejected the Claimed Invention again because the grounds for rejection still remained, i.e. lack of inventive step for Claims 3-8 and 13-17, amended on May 24, 2016, and Claims 1, 3-8, and 11-17,[2] amended on May 24, 2016, for failure to meet the support requirement. Therefore, the examiner notified the plaintiff that the original decision was upheld upon reconsideration before trial (Plaintiff's Exhibit 3).

4) After that, the IPTAB reviewed the above appeal as Case No. 2016Won2781 and rejected the appeal on April 24, 2017 because "Claim 3 of the Claimed Invention lacks an inventive step as a skilled person would have easily made the invention from Prior Arts 1 and 2, and if there is a ground for rejection

2) Hereinafter, "Claim ○ in the Claimed Invention" refers to the claim amended on May 24, 2016.

even for one claim, the patent application shall be rejected as a whole (Plaintiff's Exhibit 1).”

2. Summary of Parties' Arguments

A. Plaintiff's Argument

As shown in the following reasons, in the Claimed Invention, Claims 1, 3-8, and 11-17 satisfied the requirements, and Claims 3, 4, 7, 8, 13-15, and 17 do not lack an inventive step based on Prior Arts 1 and 2. Therefore, although the registration of the Claimed Invention should not have been rejected, the IPTAB decided differently and erred in its decision.

1) Support Requirements of Claims 1, 3-8, and 11-17

A) The support requirement of the specification has a different goal and underlying provision from those of the enablement requirement. Thus, unlike the enablement requirement analysis, the standard is whether there is a description of the invention for the corresponding items written in the claims, which are different from the enablement requirement.

B) However, at the time of Claim 1's application, it was widely known to skilled persons that the hypoxic state could be induced by blocking the blood flow using an embolic agent. In the specification of the Claimed Invention, the principle of mechanical embolization, conduct method, and its effects, pharmacological mechanism and effects of tirapazamine, and blockage of blood flow after tirapazamine administration were stated in detail in relation to the improved anticancer effects. Therefore, it can be said that the what is stated in Claim 1 is also stated in the description of the invention and

thus Claim 1 is supported by the description of the invention. For the same reason, Claims 5, 6, 11, 12, and 16 that include the features regarding the combination of an embolic agent with tirapazamine and administration of an embolic agent after tirapazamine that are technical characteristics of Claim 1 are supported by the description of the invention likewise.

C) Also, stilbene in Claim 3 is specified as a microtubule polymerization inhibitor, and in the specification of the Claimed Invention, all items regarding the combined administration of stilbene and tirapazamine as the microtubule polymerization inhibitor are correspondingly stated in Claim 3. Furthermore, even the pharmacological data obtained by combining stilbene 5c, a representative example of stilbene as a microtubule polymerization inhibitor, with tirapazamine are written so that a skilled person can easily recognize the combination of tirapazamine with a stilbene compound that inhibits microtubule polymerization would have the identical action compared with the combination of stilbene 5c with tirapazamine. Therefore, Claim 3 is supported by the explanation of the invention, and Claims 4, 7, 8, 13-15, and 17 that include the contents with regard to the combination of stilbene with tirapazamine and the administration of stilbene after tirapazamine that are technical characteristics of Claim 3 are supported by the description of the invention likewise.

2) Inventive Step of Claims 3, 4, 7, 8, 13-15, and 17

In Prior Arts 1 and 2, there is no suggestion or implication with regard to the combination of stilbene with tirapazamine and its administration order as written in Claim 3. Additionally, in Claim 3, the combined administration of stilbene and tirapazamine has the synergistic tumor necrosis effect compared with the monotherapy, while Prior Arts 1 and 2 only present the tumor growth suppression effect. The tumor necrosis effect is so significant that it would not have been predicted from Prior Arts 1 and 2. Therefore, with regard to

Claim 3, the invention cannot be made easily out of Prior Arts 1 and 2 so that its inventive step should not be denied. Likewise, Claims 4, 7, 8, 13-15, and 17 that share the technical characteristics of Claim 3 are not denied of an inventive step.

B. Defendant's Argument

For the following reasons, Claims 1 and 3 in the Claimed Invention fail to meet the support requirement of the written description requirements, and for the inventive step of Claim 3 is denied by Prior Arts 1 and 2. Meanwhile, if a patent application has two or more claims, the application must be rejected as a whole even if the ground for rejection only concerns one claim. Thus, the registration of the Claimed Invention must be rejected as a whole and the IPTAB decision concluding so is well-grounded.

1) Whether Claims 1 and 3 Are Supported

Claims 1 and 3 are pharmaceutical use invention, and although the pharmacological mechanism that shows the pharmacological effect is not clearly known, there are no cases regarding pharmacological data, etc. that can confirm the pharmacological effect of Claims 1 and 3, or specific statements that can replace such cases in the specification of the Claimed Invention. Therefore, Claims 1 and 3 fail to meet the written description requirement as they are not supported by the description of the invention.

2) Inventive Step of Claim 3

A) First, a skilled person who is familiar with Prior Art 1 that share the technical field and purpose with Claim 3 can recognize that the antitumor activity of tirapazamine can be increased if a material that can produce the hypoxic environment in a tumor is

combined with tirapazamine. Moreover, in Prior Art 2, the activation of vascular blockage of stilbene 5c, which is a microtubule polymerization inhibitor, and the synergistic anticancer activity when combined with an anticancer agent are stated, so that a skilled person has a motivation to choose stilbene 5c of Prior Art 2 instead of DMXAA of Prior Art 1 as a vascular agent.

B) Moreover, with regard to the administration order of tirapazamine and stilbene, it is within a skilled person's ordinary level of creativity to apply tirapazamine before or after administrating the vascular agent in order to maximize the anticancer activity. Furthermore, maximizing the bioreductive agent effect by making the hypoxic environment through the administration of the vascular agent when the medicinal effect is manifested by the administration of tirapazamine, which is a bioreductive agent, is well-known.

C) Also, the effect of Claim 3 due to the combined administration of tirapazamine and stilbene can also be easily predicted from Prior Arts 1 and 2.

C. Issues Presented

1) Meanwhile, in this case, both parties make arguments that focus on Claims 1 and 3 for support requirement and Claim 3 for inventive step regarding whether there are grounds for rejection of the Claimed Invention. As for the rest of the claims that include the technical characteristics of Claim 1 or 3 as they are, no separate specific argument has been made by assuming that the arguments regarding Claim 1 or 3 would apply.

2) Therefore, the issues of this case are: ① whether Claims 1

and 3 lack support thus fail to meet the written description requirement; and ② whether the inventive step of Claim 3 is denied by Prior Arts 1 and 2. The issues are analyzed below.

3. Whether Claims 1 and 3 Lack Support

A. Legal Principle

Article 42(4)(i) of the Patent Act states that claims that are to be protected by patent must be supported by the description of the invention, and its purpose is to prevent an unfair result, wherein patent rights are given to an invention that has not been disclosed by an applicant who specifies items in claims that are not stated in the detailed description of the invention in the specification attached to the patent application. Thus, whether the specification requirement set in Article 42(4)(i) of the Patent Act is satisfied must be determined by whether, from the point of view of a skilled person, the description of the invention corresponds to what is written in the claims based on the technical level at the time of the patent application, in accordance with the objective of the above provision (see Supreme Court Decision 2010Hu2582 decided on October 13, 2011, etc.); it must not be determined by whether there is a clear and detailed statement in the detailed description of the invention that a skilled person can conduct the invention easily, as set by Article 42(3)(i) of the Patent Act, a provision that has a different objective (see Supreme Court Decision 2012Hu832 decided on September 4, 2014).

Also, if the disclosure in the detailed description of the invention can be expanded or generalized up to the invention stated in the claim based on the technology level at the time of filing, the claim is supported by the detailed description of the invention (see Supreme Court Decision 2014Hu2061 decided on May 26, 2016).

B. Discussion

1) Claim 1

However, for the following reasons, Claim 1 is supported by the description of the invention so that, in Claim 1, there is no error of insufficient description set by Article 42(4)(i) of the old Patent Act.

A) First, Claim 1 is a medicinal use invention that defines the active principles as “tirapazamine” and “an embolic agent chosen from at least one of Lipiodol, Gelfoam, blood clot, and nanoparticles”; the medicinal use is “tumor treatment of mammals”; and the administration order of the above active substances is “administration of the embolic agent after tirapazamine.”

B) Also, based on the specification (Plaintiff's Exhibit 2) below of the Claimed Invention, the description of the invention related to Claim 1 can be summarized as follows. That is, for tumor treatment, there are hypoxia-activated bioreductive agent, Gelfoam, blood clot, and nanoparticles. Administration of tirapazamine can be done before the embolic agent administration with regard to the administration order. In terms of killing tumor cells as well, the combined administration is synergistic compared with using each agent for monotherapy.

<0033> The purpose of “embolization” is to induce blockage of arterial branches that supply to tumor-containing areas by injecting materials (Lipiodol, Gelfoam, blood clot, etc.) so that the tumor cells die because obtaining appropriate blood flow is unavailable. It means a localized therapy that is used for a tumor or tumor-containing area to which, for instance, the hepatic artery supplies. ... (omitted) ...
<0034> In one embodiment of this invention, for instance, the hypoxia-activated bioreductive agent (HABA) (tirapazamine) is combined with embolization for the treatment of a local tumor. ...(omitted)... As the result of administering two agents simultaneously, tirapazamine is closed

with embolic agents, such as Lipiodol, in a tumor. ...(omitted)... Such unique combination has a major advantage of sufficiently using the capacity of killing cells of tirapazamine, and completely removes the systemic toxicity problem observed in previous clinical studies.
<0035> Lipiodol is the most commonly used embolic agent. Other embolic agents that can be used to practice this invention in a nonrestrictive way are Gelfoam[3], blood clot, nanoparticles, and mechanical agents that have been proven clinically in achieving vascular blockage. Administration of the embolic agent and hypoxia-activated bioreductive agent (HABA) can be conducted in an arbitrary and appropriate method. For example, HABA can be administered before the administration of the embolic agent (e.g., about (1−120 min) before), and the following administration of embolic agent confines HABA to the above region (hereinafter omitted).
<0036> ... (omitted) ... Regarding the effect of mechanical embolization and HABA administration on the tumor-killing effect, the combination therapy has a larger effect compared with using each method as a monotherapy. That is, the effect is not merely additional but is synergistic.

C) Meanwhile, based on the above legal principle, whether Claim 1 satisfies the support requirements must be determined by whether, from the point of view of a skilled person, the items written in the claims and in the description of the invention must correspond with each other when seen based on the technology level at the time of the filing. However, at the time of Claim 1's application, the fact that the embolic agent limits the blood flow in blood vessels mechanically and tirapazamine as a bioreductive agent were already known. Then a skilled person reading the description of the invention disclosing the combined administration and administration order of tirapazamine and embolic agents, specific type of embolic agents, and anticancer effects of the combined administration would recognize that the description contains all items that correspond to Claim 1. We must not conclude that Claim 1 is supported by the description only when

3) In the specification of the Claimed Invention, as an embolic agent, “gelforeum” is mentioned aside from “Gelfoam.” They all refer to “Gelfoam.”

the description includes pharmacological data, etc. that can confirm the tumor treatment effect of Claim 1 or specific statements that can replace such data.

D) Therefore, Claim 1 is supported by the description of the invention as what is stated in the description corresponds with what is claimed.

E) Discussion on the Defendant's argument on the issue

Regarding this, the defendant argues that Claim 1 has an error of insufficient description as it fails to meet the support requirement, because it included nanoparticles whose effect as embolic agents were not proven, and for the rest of the embolic agents in Claim 1, their effect was announced only for liver cancer treatment, so that the effect could not be expanded or generalized for all cancer types.

However, as shown from the underlying facts, in consideration of the procedural history of the examination and administrative decision, the argument of the defendant raises a new ground for rejection that an opportunity to submit arguments has not been given to the plaintiff. Therefore, dismissing the present petition for revocation of the IPTAB decision on this ground would be erroneous and this argument of the defendant cannot be accepted without further discussion.

2) Claim 3

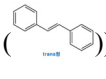
Because of the following reasons, Claim 3 is also supported by the description of the invention and Claim 3 has no error of insufficient description as set forth in Article 42(4)(i) of the old Patent Act.

A) First, Claim 3 is a medicinal use invention that defines the active principles as “tirapazamine” and “stilbene,” a microtubule polymerization inhibitor; the medicinal use is “tumor treatment”; and the administration order of the above active substances is “administering stilbene after tirapazamine.” None of the active principles is specified

as a specific chemical formula or compound name, but is limited to have the frame of stilbene, i.e. 1,2-diphenylethylene[4] (ethylene) that has the microtubule polymerization suppression function.

B) However, according to the specification (Plaintiff's Exhibit 2) of the Claimed Invention as below, the description of the invention in relation to Claim 3 states the following: To reduce the adverse effects caused by the systemic administration of the hypoxia-activated bioreductive agent and increase the activity of the above material, a vascular disrupting agent that can induce the hypoxic state in tumor is used in combination with the hypoxia-activated bioreductive agent, and a stilbene derivative including stilbene 5c can be used as a vascular disrupting agent, and tirapazamine can be used as a hypoxia-activated bioreductive agent. The vascular disrupting agent can be administered after tirapazamine, and better efficacy of such combination therapy for tumor treatment.

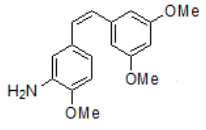
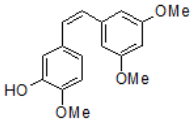
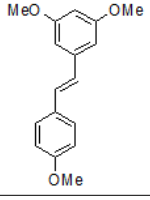
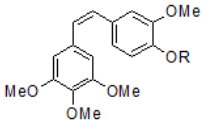
<0017> The basis of this invention is the method for improving antitumor activity of the above agent and development of its composition, while reduction or minimization of the adverse effects may occur as the result of the systemic administration of the hypoxia-activated bioreductive agent (HABA). ...(omitted)... The administration strategy of this invention includes, in a local area wherein the HABA activation is preferred (e.g., in tumor or tumor-containing area), inducing the hypoxic state. ...(omitted)... Two general approaches to conducting such technology have been developed. ···(omitted)··· In the second approach, HABA is administered to a tumor, in combination with one or more hypoxic inducers (e.g., vascular disrupting agent (VDA) and angiogenesis inhibitor (AAA)).
<0020> ...(omitted)... Meanwhile, the step wherein the above hypoxic area is formed locally can be performed with the above provision step at the

4) “Stilbene” is an aromatic hydrocarbon expressed as the chemical formula ($C_{14}H_{12}$), and two isomers (cis-type () and trans-type ()) exist (see NAVER Encyclopedia and Doosan Encyclopedia).

same time. In an embodiment of this invention, the above local formation step provides at least one vascular disrupting agent chosen from combretastatin, combretastatin derivatives, (5S)-5-(acetylamino)-9,10,11 -trimethoxy-6,7-dihydro-5H-dibenzo[a,c]cycloheptene-3-mono or dihydrogen phosphate(ZD6126), DMXAA (5,6-Dimethylxanthenon-4-acetic acid, (N-[2-[4-hydorxyphenyl)amino-3-pyridinyl]-4-methoxybenzenesulfonamide) (E7010 or ABT-751), stilbene derivatives (e.g., cis-3,4',5-trimethoxy-3'-aminostilbene (stilbene 5c) and cis-3,4',5-trimethoxy-3'-hydroxystilbene (stilbene 6c) or their derivatives), and morpholino-carbamate derivatives (prodrug of stilbene 5c).
<0039> ...(omitted)... Surprisingly, the combination of VDA and a hypoxia-activated bioreductive agent (e.g., tirapazamine) is more efficacious than predictions based on the monotherapy for solid cancer treatment. That is, their activities are synergistic (the tumor-killing effect of the combined agent above is larger than the numerical sum of the sole effect of each agent). For instance, VDA provided after tirapazamine allows the activation of tirapazamine, and the consequent killing of tumor cells is increased by up to 10 times compared with the tumor cell killing by each agent alone. (hereinafter omitted)

C) Meanwhile, at the time of application of the Claimed Invention, it was already known that those having the stilbene frame (stilbene 5c (cis-3,4‘,5-trimethoxy-3’-aminostilbene), stilbene 6c (cis-3,4',5-trimethoxy-3‘hydroxystilbene), trans-3,5,4’-trimethoxystilbene, combretastatin A4-phosphate (CA4P), combretastatin (CA4)) bind to colchicine bonding site of tubulin[5] instead of colchicine to suppress microtubule polymerization (see Plaintiff's Exhibit 8, lines 20-25 in the left column on page 390 and the second paragraph in the right column on page 393).

5) “Tubulin” is a monomer of microtubules that composes the cellular frame, and such tubulins bond each other consecutively to form thread-like microtubules (see NAVER Encyclopedia and Doosan Encyclopedia).

stilbene 5c	stilbene 6c	trans-3,5,4'-trimeth oxystilbene	CA4 : R=H CA4P : R=PO_3Na
			

D) Thus, based on the technology level at the time of application of Claim 3 above, a skilled person who is familiar with the description of the invention disclosing the combined administration of tirapazamine and a stilbene derivative including stilbene 5c, a microtubule polymerization inhibitor, administration order, and its anticancer effect, would recognize that the items that correspond to Claim 3 are all disclosed in the description of the invention.

E) Moreover, the specification of the Claimed Invention discloses that stilbene 5c is administered after administrating tirapazamine to induce tumor necrosis and reduce the tumor volume (see [Figure 5D] and [Figure 6], Paragraphs [0076]~[0078], Plaintiff's Exhibit 2). Given that the compounds having the stilbene frame, including stilbene 5c, etc., suppresses microtubule polymerization by binding to tubulin, as previously shown, the effect of combined administration of tirapazamine and stilbene 5c (i.e., vascular disrupting agent) can be generalized or expanded for microtubule polymerization inhibitors having the stilbene frame.

F) Therefore, from any perspective, Claim 3 is supported by the description of the invention.

4. Inventive Step of Claim 3

A. Comparison with Prior Art 1

1) Element-by-element Comparison

Element	Claim 3 (Plaintiff's Exhibit 2)	Prior Art 1 (Defendant's Exhibit 3)
1	A kit to treat tumors of mammals;	- Antitumor effect (see "Conclusion" of the abstract on page 373)
2	where said kit includes stilbene and tirapazamine;	- Combined administration of DMXAA with tirapazamine (SR 4233) (see "Conclusion" of the abstract on page 373)
3	and explanatory documents that include administration information that stilben is administered after tirapazamine	- The interaction between DMXAA and SR 4233 was maximal with tirapazamine (SR 4233) given between 15 min before and 60 min after DMXAA (see [Figure 3], lines 1-5, left column on page 375).
4	and said stilbene is a microtubule polymerization inhibitor.	- DMXAA is a potent tumor blood flow inhibitor as a vasoactive agent (see "Conclusion" of the right column on page 375)

2) Analysis of Commonalities and Differences

A) Element 1

First, Element 1 of Claim 3 and the corresponding element of Prior Art 1 are identical in that they are specified as medicinal use to treat tumors.

While Element 1 presents a kit that includes active principles in

addition to the above medicinal use, Prior Art 1 does not have any mention of it. However, the composition of the kit that includes the explanatory documents of drug composition, etc. is a well-known and commonly used art. Therefore, Element 1 is a mere addition of such a well-known and commonly used art to the corresponding element of Prior Art 1, and Element 1 of Claim 3 and the corresponding element of Prior Art 1 are essentially identical.

B) Elements 2 and 4

While Elements 2 and 4 of Claim 3 are to use tirapazamine in combination with stilbene, which is a microtubule polymerization inhibitor, as active principles of the kit, the corresponding element of Prior Art 1 is to use tirapazamine (SR 4233) in combination with DMXAA, which is a blood-flow blocking agent.

Both corresponding elements are common in that tirapazamine and a substance that blocks blood flow are used in combination. However, in Elements 2 and 4, as the specific material that blocks blood flow, stilbene which is a microtubule polymerization inhibitor, is used, while DMXAA is presented as the corresponding element of Prior Art 1, thereby showing a difference (hereinafter, “Difference 1”).

C) Element 3

Also, Element 3 of Claim 3 sets out the administration order of stilben and tirapazamine that stilbene is administered after tirapazamine, limiting the administration of a blood-flow blocking agent to after administering tirapazamine. However, the corresponding element of Prior Art 1 suggests that the most optimal time of tirapazamine administration is between 15 min before and 60 min after DMXAA so that the administration order of a blood-flow blocking agent is not limited to after the administration of tirapazamine, thereby making a difference (hereinafter, “Difference 2”).

B. Analysis of Differences

1) Difference 1

For the following reasons, it does not seem that the Difference 1 that exists between Elements 2 and 4 of Claim 3 and the corresponding element of Prior Art 1 can be easily overcome by a skilled person by combining Prior Art 1 with Prior Art 2.

A) According to the specification (Plaintiff's Exhibit 2) of the Claimed Invention below, the problem Claim 3 seeks to solve is to reduce the adverse effects caused by the systemic administration of the hypoxia-activated bioreductive agent while increasing the activity of the above material, and the solution to the problem is combining a vascular disrupting agent that can induce the hypoxic state in tumor with the hypoxia-activated bioreductive agent (see Paragraphs [0017] and [0020]).

B) Meanwhile, according to the disclosures in Prior Art 1, Prior Art 1 is also an invention to review whether a material that suppresses the blood flow increases the antitumor effect of the hypoxia-activated bioreductive drug, and it was presented that when tirapazamine was used in combination with DMXAA, which is a strong blood flow inhibitor, the tumor growth was delayed prominently (see [Figure 3], [Purpose] of the abstract, Defendant's Exhibit 3). Therefore, the problem and solution of Prior Art 1 are common with those of Claim 3.

C) However, in 1996, which was prior to the date of claimed priority of the Claimed Invention, “Antivascular approaches to solid tumor therapy: evaluation of tubulin binding agents” (Plaintiff's Exhibit 6) was published on S86-S88 of the British Journal of Cancer, and it states that although flavone acetic acid (FAA) and vinblastine have

similar blood flow blockage and tumor growth suppression effects, only flavone acetic acid (FAA) increased the effect of tirapazamine when administered in combination with tirapazamine. The cause of increasing the effect of tirapazamine by FAA is not related to the blood-flow blockage effect, but it could be related to the interaction between cytokine TNF,[6] which is relevant with FAA action and tirapazamine (see [Summary] on S86, lines 27-31 in the right column, [Table 1] and [Figure 2] on S87, and lines 4-8 in the left column on S88).

Therefore, according to the above research paper, on the date of claimed priority of the Claimed Invention, a skilled person would have known that a mechanism to isolate TNF was necessary to for a material to have synergistic effects when administered in combination with tirapazamine, even when it had an identical action as a blood-flow blocking agent. While stilbene 5c is a blood-flow blocking agent, it does not have a mechanism of inducing TNF production.

D) Moreover, in Prior Art 2, stilbene 5c reduced blood flow only in the tumor without having toxicity in normal organs. Furthermore, it was presented that even monotherapy suppressed the tumor growth rate by about 40%, and the tumor growth suppression effect was much more effective when stilbene 5c was administered in combination with bevacizumab (see Defendant's Exhibit 4, [Conclusion] of the abstract on page 191 and [Figure 7], second paragraph in the left column on page 198). Therefore, Prior Art 2 only suggests that stilbene 5c is to be combined with bevacizumab; it does not provide a motivation to choose only stilbene 5c from two drugs and combine stilbene 5c with an antitumor drug having a different mechanism.

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6) “TNF” is an acronym of “tumor necrosis factor,” which means tumor necrosis factor, and one of the cytokines produced by macrophage, etc. (see NAVER Encyclopedia and Life Sciences Unabridged Dictionary).

E) Thus, in consideration of such disclosures of Prior Arts 1 and 2 and the technical knowledge known at the time of the date of claimed priority of the Claimed Invention, it is hard to expect that a skilled person would have replaced DMXAA of Prior Art 1 with stilbene 5c or a stilbene derivative of Prior Art 2 by combining Prior Art 1 with Prior Art 2 with a reasonable expectation of success.

F) Furthermore, according to the specification of the Claimed Invention, while the administration of tirapazamine or stilbene 5c alone induces 10% or 20% of tumor necrosis, the combination of tirapazamine with stilbene 5c induces the tumor necrosis increase by up to 70% or 80% (see Plaintiff's Exhibit 2, Paragraph <0041>). Therefore, the effect of the combined administration of tirapazamine and stilbene is significant that it cannot be predicted from Prior Arts 1 and 2.

2) Difference 2

On the other hand, for the following reasons, it seems that the Difference 2 that exists between Element 3 of Claim 3 and the corresponding element of Prior Art 1, limiting the administration order of a blood-flow blocking agent to after the administration of tirapazamine, can be easily overcome by a skilled person.

A) When administering two or more drugs in combination, optimizing the administration order of two drugs is an ordinary process in the development of combination therapy, so that it is within the scope of ordinary level of creativity, and there was no evidence that a skilled person would have expected at the time of the date of claimed priority of the Claimed Invention, that administration of a vascular disrupting agent after the administration of tirapazamine could not induce antitumor effects.

B) Rather, in consideration of each pharmacological mechanism of vascular disrupting agent and tirapazamine (an anticancer agent that

is activated in the hypoxic environment), if the blood flow toward tumor is reduced by administering a vascular disrupting agent first, the migrating degree of tirapazamine to the tumor tissue can be reduced, so that a skilled person would think that inducing the hypoxic state in the tumor tissue by administering a vascular disrupting agent after administering tirapazamine first is more efficient. Therefore, there is enough motivation to administer tirapazamine, an anticancer agent, first before a vascular disrupting agent, and such a try does not seem to have a particular technical difficulty.

C) Meanwhile, the specification of Prior Art 1 states that the most optimal tirapazamine administration time is between 15 min before and 60 min after DMXAA (a vascular disrupting agent) (see Defendant's Exhibit 3, lines 1-5 in the left column on page 375), presenting a method where tirapazamine is administered 15 min before a vascular disrupting agent.

D) Thus, a skilled person who has the aforementioned common technical knowledge would have easily derived the composition that tirapazamine is administered before a vascular disrupting agent from Prior Art 1.

C. Summary of Analysis

Based on the foregoing, Claim 3 of the Claimed Invention cannot be easily invented even if a skilled person combines Prior Art 1 with Prior Art 2 so that its inventive step is not denied.

5. Conclusion

Thus, Claims 1 and 3 of the Claimed Invention are well supported

and do not have the error of insufficient description, and the inventive step of Claim 3 is not denied by Prior Arts 1 and 2. Since the patent registration of the Claimed Invention should not have been rejected, the IPTAB decision upholding the rejection was erroneous. The plaintiff's claim to revoke the IPTAB decision is well grounded.

Presiding Judge Kyuhong LEE
Judge Sungyop WOO
Judge Jinhee LEE

PATENT COURT OF KOREA
FIRST DIVISION
DECISION

Case No.: 2018Heo1240 Correction of Registration (Patent)

Plaintiff: STDIP Holdings Co., Ltd.

Defendant: Commissioner of the Korean Intellectual Property Office

Intervenor for Defendant: Google Korea Co., Ltd.

Date of Final Trial: July 5, 2018

Decision Date: August 16, 2018

ORDER

1. The plaintiff's claim is dismissed.

2. The cost arising from this litigation, including the cost of intervening, shall be borne by the plaintiff.

PLAINTIFF'S DEMAND

The IPTAB Decision 2017Jung117 dated December 11, 2017 shall be revoked.

OPINION

1. Background

A. IPTAB's Relevant Invalidation and Decision Underlying Current Case

1) Procedural History of Relevant Invalidation Decision

The intervenor for the defendant (hereinafter the “intervenor”) filed a claim in IPTAB against the plaintiff to invalidate Claims 1, 2, 4, 7, 9, and 12 of the patented invention at issue (the “Subject Invention”) under Case No. 2017Dang1489 on May 5, 2017. On August 7, 2017, the IPTAB partially ruled in favor of the defendant (the “Relevant IPTAB Invalidation”), stating that Claims 7 and 12 of the Subject Invention were invalid, on the grounds that novelty or inventive step of was denied, and Claims 1, 2, 4, and 9 were valid, on the grounds that inventive step was not denied (Defendant's Exhibit 6). Accordingly, the plaintiff filed an action against the intervenor seeking revocation of the part concerning Claims 7 and 12 of the Relevant IPTAB Invalidation under Case No. 2017Heo6439 on September 6, 2017, whereas the intervenor filed an action against the plaintiff seeking revocation of the part concerning Claims 1, 2, 4, and 9 of the Relevant IPTAB Invalidation under Case No. 2017Heo6941 on September 28, 2017 (hereinafter, Case Nos. 2017Heo6439 and 2017Heo6941 are collectively referred to as “relevant invalidation cases”).

2) IPTAB Decision

A) On October 10, 2017, while the relevant invalidation cases were pending at this court, the plaintiff filed a petition in the IPTAB for trial to correct Claims 7 and 9 of the Subject Invention as described in item C below under IPTAB Case No. 2017Jung117.

B) The presiding administrative judge of the IPTAB notified the plaintiff to submit a written opinion to the effect that “The petition for correction trial on Claims 7 and 9 of the Subject Invention did not meet the correction requirements of Article 136(1), (3), (4), and (5) of the Patent Act” on November 8, 2017 (Defendant's Exhibit 2).

C) The plaintiff submitted a written opinion to the IPTAB on November 24, 2017 in response to the above notification. However, the IPTAB decided to dismiss the above petition on December 11, 2017, because the corrections of Claims 7 and 9 after the correction of the Subject Invention were in violation of the requirements of Article 136(1), (3), (4), and (5) of the Patent Act.

B. Subject Invention (Plaintiff‘s Exhibit 2)

1) Title of Invention: System and Method for Changing Display Structure of Mobile Communication Terminal
2) Filing Date of Application/ Application Number: September 10, 2001/ No. 10-2001-55440
3) Date of Registration / Registration Number: October 29, 2003 / Patent No. 405048
4) Summary of Invention

The patent invention relates to a system and method for changing a display structure of a mobile communication terminal, and the specification includes the following description.

A) Technical field
The present invention relates to a system and method for changing the display structure of a mobile phone terminal, which is capable of arbitrarily changing a display structure of a mobile phone terminal according to the

usage behavior of a user (paragraph 1 on page 2).

B) Problems of Background Art

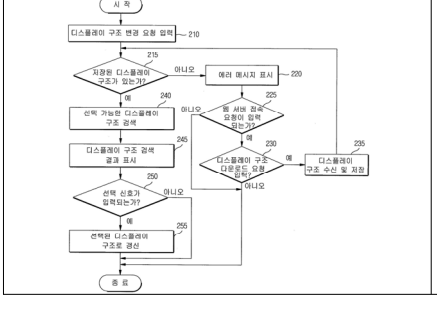
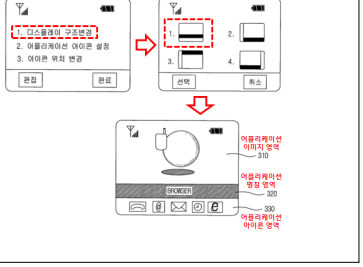
The images that can be applied to the background of a conventional liquid crystal display (LCD) have a disadvantage wherein the usage convenience of a mobile phone terminal is not taken into account, emphasizing only the style (paragraph 5 on page 2).

C) Problem to Be Solved

An objective of the present invention is to provide a system and method for changing the display structure of a mobile communication terminal capable of various configurations for the display structure of an LCD according to the users' preference (paragraph 8 on page 2).

In addition, a random icon selected by the user can be specified for a specific application, so that the application corresponding to the selected icon to be executed and the position of the icon can be freely arranged by the user in the LCD (paragraph 10 on page 2).

D) Solution to the Problem

[FIG. 2] A flowchart showing how to change the display structure of an LCD	[FIG. 3B to 3D] Output screen in the process of changing the display structure
	

Hereinafter, a method for changing the display structure according to the present invention will be described through Figs. 2 and 3b to 3d (paragraph 6 on page 5).

Fig. 2, in step 210, shows the mobile communication terminal receiving a display structure change request from a user (paragraph 8 on page 5).

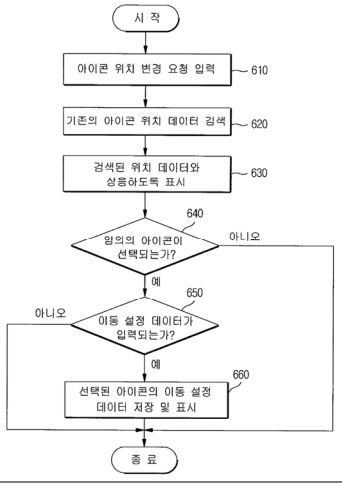
That is, as shown in Fig. 3b, when the mobile communication terminal displays “1. Display structure change, 2. Application icon setting, 3. Icon position change,” it is the case wherein the user selects “1. Change the

display structure" (paragraph 9 on page 5).
Again in Fig. 2, in step 215, the mobile communication terminal checks whether or not there is a display structure already stored in the mobile communication terminal storage unit (paragraph 10 on page 5).
If the user-selectable display structure is stored in the storage unit as a result of the check in step 215, the flow advances to step 240 to search for a display structure that the user can select (paragraph 20 on page 5).
At step 245, the mobile communication terminal displays at least one display structure retrieved through step 240 on the LCD of the mobile communication terminal (paragraph 21 on page 5).
In step 250, the mobile communication terminal checks whether or not a selection signal for a random display structure is input from the user. If a selection signal is input from the user, the flow advances to step 255 to update the display structure to a display structure selected by the user, and the step finishes (paragraph 22 on page 5).
The user can change the display structure by selecting and inputting a number representing the desired type of display structure from among at least one display structure shown in Fig. 3c (paragraph 25 on page 5).
The display structure of the LCD according to the present invention can be divided into an application image area (310), an application title area (320), and an application icon area (330) as shown in Fig. 3d (paragraph 27 on page 5).
Such a display structure is determined by a script stored in the storage unit of the mobile communication terminal. Here, a field to be included in the script will be described as an example (paragraph 6 on page 6).

Classification	Field
Layout	Location and size of application image area Location and size of application title area Location and size of application icon area
Application image area	Background color property
Application title area	Background color font, font property
Application icon area	Background color property

In Figs. 6 and 7B to 7E, a description of how to change the position of an application icon, a case wherein the user changes the arrangement order between the received message confirmation application icon and the phone book search application icon is described as an example (paragraph 15 on page 7).

[FIG. 6] A flowchart showing how the position of an application icon is changed	[FIG. 7A-7E] Output screen during application icon position change process



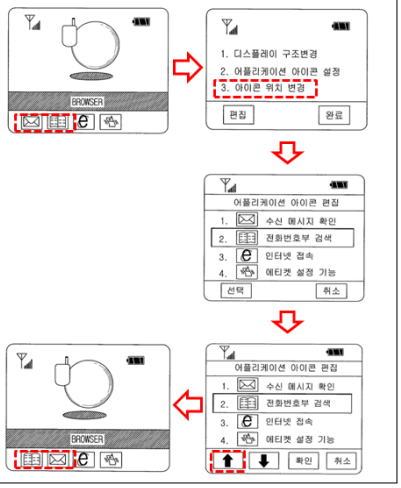


Fig. 6 in step 610 shows the mobile communication terminal receiving a request for changing an application icon position from a user, and the flow advances to step 620 to search for an existing icon position data stored in the mobile communication terminal storage unit (paragraph 16 on page 7). Fig. 7b describes step 610, where a user selects "3. Icon position change" from a menu such as "1. Display structure change, 2. Application icon setting, 3. icon position change," etc. as displayed on the user's mobile communication terminal LCD (paragraph 17 on page 7).

In step 630, the mobile communication terminal displays an icon in the application icon area (330. See Fig. 3d) retrieved through step 620 in the LCD of the mobile communication terminal, so it corresponds to each position data, and then the flow advances to step 640 to check whether or not an icon is selected by the user (paragraph 18 on page 7).

If the user selects the "phone book search application icon" in the application list of Fig. 7c, a screen display—as shown in Fig. 7d—is output to the mobile communication terminal LCD (paragraph 20 on page 7).

In step 650, the mobile communication terminal checks whether movement setting data is input from the user (paragraph 22 on page 7).

In Fig. 7d, upward and downward direction movement buttons are provided to change the position of the "phone book search application icon" selected by the user (paragraph 23 on page 7).

When the user selects the upward direction movement button, the icon is positioned higher than the existing position and, as a result, the icon is positioned in the front side on the application icon area (330. See Fig. 3d) (Fig. 7e illustrates a state in which the position of the “phone book search application icon” is changed by the user selecting the upward position movement button) (paragraph 24 on page 7).
Again, in Fig. 6, when icon movement setting data selected by the user is entered as a result of the check in step 650, the next is step 660, where the icon movement setting data is renewed and saved. In addition, the renewed icon movement setting data is used to indicate the icon on a proper location in the LCD (paragraph 2 on page 8).

5) Claims at the Time of Registration: As stated in the “Before correction” column below.

C. Subject of Petition for Correction Trial[1)]

1) Claim 7

Before correction	After correction
A method of changing an arrangement of icons displayed on a display unit of a communication device in response to an application executable in a communication device, composed of: a step of receiving an icon arrangement change command from a user; a step of retrieving an existing icon arrangement data displayed on a display unit of the above communication device;	A method of changing an arrangement of icons displayed on a display unit of a communication device in response to an application executable in a communication device, composed of: a step of receiving an icon arrangement change command from a user; a step of retrieving an existing icon arrangement data displayed on a display unit of the above communication device;

1) According to Plaintiff's Exhibit 3 and Defendant's Exhibit 2, the claims of the Subject Invention were corrected in the correction trial at issue as underlined.

Before correction	After correction
a step of displaying at least one application-designated data on the display unit of the communication device in a predetermined manner using the icon arrangement data, wherein, the application-designated data includes at least one out of an application name and an icon above; a step of receiving a selection command for random application-designated data among the above application-designated data from the above user; a step of receiving the position-change data for changing a display position on the display unit of the communication device with respect to the selected application designated data; a step of storing the above position-change data corresponding to the above application-designated data; a step of arranging the above icon on the display unit of the above communication device using the above position-change data.	a step of displaying at least one application-designated data on the display unit of the communication device in a predetermined manner using the icon arrangement data, wherein, the application-designated data includes at least one out of an application name and an icon above; a step of receiving a selection command for random application-designated data among the above application-designated data from the above user; a step of receiving the position-change data for changing a display position on the display unit of the communication device with respect to the selected application designated data; a step of storing the above position-change data corresponding to the above application-designated data; and a step of arranging the above icon on the display unit of the above communication device using the above position-change data; wherein the display structure is determined by the position and size of the application icon area (“Correction 1”) and the change of the arrangement of the above icon is executed within the application icon area in a selectable display structure (“Correction 2”)(hereinafter referred to as “Claim 7 after correction,” etc., and the same applies to other claims).

2) Claim 9

Before correction	After correction
A communication device in which the display structure can be changed, comprising of: a means for receiving a display structure change command or a display structure data selection command from a user; a means for retrieving at least one prestored display structure data; a means for displaying the display structure data in a predetermined manner; and a means for changing the screen configuration to correspond to the display structure data corresponding to the above selection command.	A communication device in which the display structure can be changed, comprising of: a means for receiving a display structure change command or a display structure data selection command from a user; a means for retrieving at least one prestored display structure data; a means for displaying the display structure data in a predetermined manner; and a means for changing the screen configuration to correspond to the display structure data corresponding to the above selection command; wherein the above display structure is determined by the position and size of the application icon area (“Correction 1”).

3) Claim 12

Before correction	After correction
A recording medium on which a program of instructions executable by a digital processing apparatus is tangibly embodied and can be read by a digital processing apparatus, in order to perform the display structure modification method described in Claims 1 to 7.	(Same as before the correction)

[Factual Basis] Undisputed facts, statements in Plaintiff's Exhibits 1 to 3 and Defendant's Exhibits 1 and 6, and the purport of the overall argument

2. Summary of Parties' Arguments and Issue

A. Plaintiff's Arguments

The Claims 7, 9, and 12 after correction meet the requirements of Article 136(1) and (3) to (5) of the Patent Act, so the correction at issue should be granted.

B. Defendant[2] and Intervenor's Argument

The Claims 7, 9, and 12 after correction do not meet the requirements of Article 136(3) to (5) of the Patent Act, so this correction should not be granted.

C. Summary of Issue

As Corrections 1 and 2, which are additionally included in the correction of Claim 7 of the Subject Invention, include the term "display structure." There is also a dispute between the parties in the interpretation of the above "display structure," the technical meaning of the above "display structure" in Corrections 1 and 2 of Claim 7 of the Subject Invention will be discussed first, and the legitimacy of correction of the Subject Invention will be examined.

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2) The defendant withdrew the claim that the Claim 7 of the invention does not meet the requirements of Article 136(1) of the Patent Act (July 5, 2018, Trial Record).

3. Whether IPTAB Erred

A. Interpretation of "Display Structure"

1) Legal Principle

As a patent claim describes the matter the applicant wishes to have protected by patent, the determination of the invention subject to novelty and inventive step analysis should be based on what is set forth in the claims. Limiting or expanding the claims by interpretation based on the description or drawings of the invention is not permitted. At the same time, the technical meaning of the items set forth in the claims can be accurately understood when taking into account the detailed description and drawings of the invention. Thus the items set forth in the claims should be interpreted in an objective and reasonable manner by examining the technical significance to be expressed by the literal terms set forth in the claims not only based on the general meaning of the terms but also in light of the detailed description and drawings of the invention (Supreme Court Decision, 2006Heo3625, decided on October 25, 2007).

2) Discussion

In view of the following circumstances, which can be known from the described specification of the patented invention in the subject Invention, the "display structure" described in corrected Claims 7 and 9 is interpreted as a term that can include one or more areas out of an application image area, an application title area, an application icon area (hereinafter the "three areas"), and refers to the layout of the display screens determined by combining the positions and sizes of various other element areas that constitute the display screen. It does not mean that the display structure can be determined only when all the three areas are combined.

A) According to Claim 2 of the specification of the patented invention, it is stated that "the display structure includes at least one out of an application image area, an application title area, and an application icon area." Accordingly, the patented invention has made it clear from the time of filing that "the display structure" may include at least one out of an application image area, an application title area, and an application icon area.

B) According to the specification of the patented invention (paragraph 27 on page 5), it is described that "the display structure of the liquid crystal display of this invention can be divided into an application image area (310), an application title area (320), an application icon area (330) and so on." Hence, it cannot be excluded that the above "display structure" may include other areas, aside from the above three areas (for example, a status bar area or a widget area irrelevant to applications).

C) According to the table below in the specification of the patented invention (paragraph 6 on page 6), it is described as if the display structure is determined as a combination of the above three areas. However, as the text clearly states that the "Display structure is determined by a script stored in a storage unit in the mobile communication terminal, and a field to be included in the script will be described as follows as an example," it appears to be nothing but an example. Moreover, it is difficult to accept that the "display structure" can be determined only when all the above three areas are combined. However, there is no change in the fact that the "display structure" is determined only when the positions and sizes of the various element areas constituting the layout of the screen are combined, as shown in the description of the table exemplified in paragraph 6 on page 6 of the patented invention.

Such a display structure is determined by a script stored in a storage unit of the mobile communication terminal. Here, a field to be included in the script will be described, as follows, in an example (paragraph 6 on page 6).

Classification	Field
Layout	Location and size of the application image area Location and size of the application title area Location and size of the application icon area
Application image area	Background color property
Application title area	Background color font, font property
Application icon area	Background color property

D) Hence, the “display structure” in the patented invention can include any one or more of the above three areas, and it is reasonable to interpret it as a term indicating the layout of the display screen determined by the combination of the position and size of other element areas that constitute the display screen.

B. Whether Petition for Correction Trial Should Be Upheld

1) Legal Principle

According to Article 136 of the Patent Act, correction of specifications or drawings can be made within the scope of the specifications or the drawings of the patented invention, and the claims cannot be substantially expanded or changed. Whether the correction extends or changes the claim construction should be judged against the substantial content of the claims identified by the specifications and the drawings, including the description of the invention, as well as the formal description of the claim itself. If there is no possibility of unexpected harm to a third party who believes in the claims before correction, as the correction does not affect the purpose or effect of the invention, reflecting the exact contents of the description and the drawings, the trial for correction does not substantially expand or

change the scope of the claims (see Supreme Court Decision 2012Heo627, decided on February 13, 2014).

2) Whether Correction 1 of Claim 7 Falls within the Scope of the Specification or Drawings

A) Plaintiff's Arguments

Correction 1 of Claim 7 is an addition of the statement “The display structure is determined by the position and size of the application icon area.” The plaintiff argues as follows: (i) Each display structure to be selected by the user in paragraph 6 on page 6 of the patented invention is determined by “script,” and as an example of the fields included in the “script” are “position and size of application icon area.” Therefore, the above Correction 1 falls within the scope of the specification or drawings; (ii) Due to the different “position and size of the application icon area,” multiple display structures can be produced. If the user selects one of the structures, it changes to the selected display structure; (iii) Correction 1 clearly defines that the definition of the display structure is determined by the “position and size of the application icon area” even in the presence of other areas together as a whole.

B) Discussion

Based on what is shown from the background facts, evidence, and the purport of the overall arguments, as discussed below, Correction 1 to the effect that the display structure is determined by the “position and size of application icon area” does not comply with how to determine the “display structure” shown in the specification and drawings of the patented invention. Therefore, Correction 1 of Claim 7 of the corrected invention is not a correction within the scope of the specification or drawings of the patented invention.

(1) As we have reviewed in the interpretation of the “display structure,” “display structure” is a screen layout wherein the

position and size of the various element areas are combined to constitute the display screen. Hence, the display structure described in the patented invention is inevitably determined to include other element areas, in addition to the application icon area.

(2) Accordingly, if the display screen layout includes other element areas other than the application icon area, the display structure can be finally determined, only by determining the position and size of the application icon area, as well as the relative positions and sizes of the other element areas. For example, in order to change the position and size of the application icon area on the display screen, as shown in Fig. 3C of the patented invention, the display structure can be determined only when the top and bottom or right and left positions and sizes of the other element areas constituting the display screen are specified together. Further, as described in paragraph 6 on page 6 of the patented invention, the display structure can be determined only if the relative position and size of other element areas forming the display screen as well as the position and size of the application icon area should be included in the script stored in the storage unit of the mobile communication terminal. That is, the application icon area is only one of the various elements constituting the display structure, and neither in the specification nor the drawings of the patented invention shows that the position and size of the application icon area alone can determine the display structure.

(3) If it does not exclude that the other elemental areas may be included in the display structure as claimed in the plaintiff's arguments, Correction 1 should be limited, for example, to require that the display structure be determined by including the location and size of the application icon area. However, Correction 1 describes that “the display structure is determined by the position and size of the application icon area,” and it is

difficult to interpret it as in the plaintiff's arguments.

(4) Accordingly, Correction 1 of Claim 7 shall not be regarded as a correction within the scope of the specification or the drawings of the patented invention.

3) Whether Correction 1 of Claim 7 Substantially Extends or Changes the Claims

A) Plaintiff's Arguments

The plaintiff argues that, "As Claim 7 of the invention has the change of display structure and the change of icon layout as its elements: (i) the display structure can be variously configured according to the user's personality; and (ii) the position of the icon can be freely placed by the user in the liquid crystal display (LCD). Therefore, Claim 7 of the invention having the above two effects does not generate a new effect."

B) Discussion

As we have already seen, ① Correction 1 corresponds to a new embodiment because it is not the same as what is described in the specification or drawings of the patented invention; ② if a display structure is determined by the position and size of application icon area alone as is in the Correction 1, it leads to a new purpose and effect that is not consistent with the description of the patented invention before correction; ③ accordingly, Correction 1 may inflict unexpected harm to a third party. Then, Correction 1 substantially changes or extends the patent claim.

D. Whether IPTAB Erred

A petition for correction trial should be reviewed as a whole unless there are special circumstances. The correction of Claim 7 as petitioned

is not within the scope specified in the specification or drawings. In addition, it substantially expands or changes the scope of the claim. Thus it fails to meet the requirements of the request for correction trial set forth in Article 136 of the Patent Act. Therefore, without further discussion of other patent claims, the petition as a whole may not be granted, and the IPTAB decision concluding the same shall be upheld.

4. Conclusion

Therefore, the plaintiff's petition to revoke the IPTAB decision is without merit and therefore dismissed as ordered.

Presiding Judge Kyungran KIM
Judge Hyeonseop JIN
Judge Kwangnam KIM

PATENT COURT OF KOREA
FIFTH DIVISION
DECISION

Case No.: 2017Heo6736 Scope of Rights Confirmation (patent)

Plaintiff: QSYS Co., Ltd.

Defendant: Bumsan Systec Co., Ltd.

Date of Final Trial: June 27, 2018

Decision date: August 24, 2018

ORDER

1. The Plaintiff's petition is dismissed.

2. The cost arising from this litigation shall be borne by the plaintiff.

PLAINTIFF'S DEMAND

The IPTAB decision on Case No. 2016Dang2923 rendered on August 22, 2017 shall be revoked.

OPINION

1. Background

A. Claimed Invention at Issue (Plaintiff's Exhibit 2 and 3)

1) Title of Invention: Waterproof toil partition plate and manufacturing process thereof

2) 1) Filing Date of Application / Date of Registration / Registration Number: June 21, 2006 / November 17, 2006 / 649330

3) Patentee: Plaintiff (patent right at issue was transferred from the original patent owner to the plaintiff on July 31, 2017)

4) Claims

[Claim 1] Waterproof toilet partition plate (hereinafter referred to as the "Claim 1 invention at issue." The remaining claims will be referred to as in the same manner) consisting of an inner core (10) (hereinafter referred to as "Element 1"); a waterproofing component (40) that is mounted on the bottom of said inner core and is made of a material selected from among synthetic resin, synthetic resin impregnated plate, aluminum, stainless steel, steel and ceramic (hereinafter referred to as "Element 2"); a water-based adhesive coating layer (50) coated on the front, rear, left and right surfaces of said core; an oil-based adhesive coating layer (52) coated on the front, rear, left and right surfaces of said waterproofing component (40) (hereinafter referred to as "Element 3"); an exterior surface material (20) attached on the front, rear, left and right surfaces of said coating layer (hereinafter referred to as "Element 4"); a PVC edge (30) attached to the bottom surface of the waterproofing

component (hereinafter referred to as "Element 5"), which is used to manufacture a toilet door (100) attached to the left end as an element of the toilet partition, a toilet door (102) attached to the right end, a toilet door (104) installed between the middle plates, a left end (110) installed on the left wall, a right end (120) installed on the right wall (114), a left plate (120) installed on the left wall, a right plate (122) installed on the right wall, and a middle plate (124) installed between the left plate (120) and the right plate (122).

[Claim 2] Further to Paragraph 1 above, a waterproof toilet partition plate consisting of said waterproofing component (40) whose top features one selected from among insertion protrusion, insertion groove, latching jaw and latching groove[1] that is mounted on the bottom of the inner core (10), which features one that corresponds to what is featured on the top of the waterproofing component (40) selected from among insertion protrusion, insertion groove, latching jaw and latching groove.

[Claim 3] (Omitted)

5) Summary of Invention

□ Problems in the Art and Existing Technologies

This invention relates to a waterproof toilet partition plate (refer to line 25 on page 2). As the toilet partition plate used in the existing toilet structure consists of an inner core (10); a water-based adhesive coating layer (50) coated on the front, rear, left and right sides of the said inner core (10)[2];

1) Although it is stated as "latcying groove" in the specifications, this appears to be a misspelling of "latching groove." Hereinafter it will be corrected as "latching groove."

2) Although it is listed as "waterproofing component (40)" in the specifications,

an external surface material (20) attached to the front, rear, left and right sides of said coating layer; and a PVC edge (30) attached to the bottom surface of said inner core (10), water or moisture easily permeates through the bottom of the inner core (10) to the bottom of the plate, resulting in decomposition or damage to the lower part of the plate (refer to lines 5 through 8 on page 3).

□ Technical Problems to Be Solved

This invention is intended to develop a toilet partition plate in which a waterproofing component (40) is mounted on the bottom of the inner core, not only to prevent water from permeating into the bottom of the plate, but also to prevent water flowing on the toilet floor from permeating into the bottom of the plate, as well as to prevent the bottom of the plate from decomposing or being damaged by water or moisture permeating into the bottom of the plate after washing the toilet partitioning plate (refer to lines 10 through 13 on page 3).

□ Elements of the Invention

This invention relates to a waterproof toilet partition plate consisting of an inner core (10); a waterproofing component (40) that is mounted on the bottom of said inner core; a water-based adhesive coating layer (50) coated on the front, rear, left and right surfaces of said core; an oil-based adhesive coating layer (52) coated on the front, rear, left and right surfaces of said waterproofing component (40); an exterior surface material (20) attached on the front, rear, left and right surfaces of said coating layer; a PVC edge (30) attached to the bottom surface of the waterproofing component, which is used to manufacture a toilet door (100) attached to the left end as an element of the toilet partition, a toilet door (102) attached to the right end, a toilet door (104) installed between the middle plates, a left end (110) installed on the left wall, a right end (120) installed on the right wall (114), a left plate (120) installed on the left wall, a right plate (122) installed on the right wall, and a middle plate (124) installed between the left plate (120) and the right plate (122). More specifically, the waterproofing component (40) is characterized by being made of a material selected from among synthetic resin, synthetic resin impregnated plate, aluminum, stainless steel, steel and ceramic (refer to lines 15 through 24 on page 3). Said waterproofing component (40) is also characterized by its top section featuring one selected from among insertion protrusion, insertion groove,

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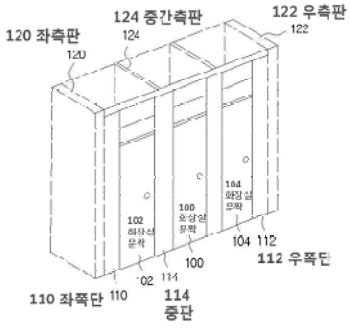
it appears to be a mis-entry of “inner core (10).”

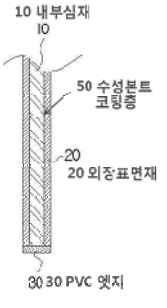
latching jaw and latching groove, mounted on the bottom of the inner core which features one that corresponds to what is featured on the top of the waterproofing component (40) selected from among insertion protrusion, insertion groove, latching jaw and latching groove (refer to lines 24 through 27 on page 3).

□ Main Drawings



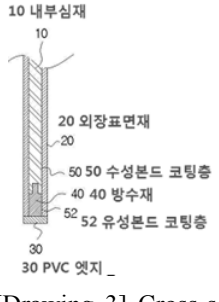
120 좌측판	120 Left plate
124 중간측판	124 Middle plate
122 우측판	122 Right plate
110 좌쪽단	110 Left end
114 중판	114 Middle plate
112 우쪽단	112 Right end
102 화장실 문짝	102 Toilet door
100 화장실 문짝	100 Toilet door
104 화장실 문짝	104 Toilet door

[Drawing 1] A perspective view showing the partitioning structure of a toilet



내부심재	Inner core
수성본드 코팅층	Water-based adhesive coating layer
외장표면재	External surface material
PVC 엣지	PVC edge

[Drawing 2] Cross-sectional view depicting the existing toilet partitioning plate used in the toilet partitioning structure



내부심재	Inner core
외장표면재	External surface material
수성본드 코팅층	Water-based adhesive coating layer
방수재	Waterproofing component
유성본드 코팅층	Oil-based adhesive coating layer
PVC 엣지	PVC edge

[Drawing 3] Cross-sectional view depicting the toilet partitioning plate of this invention

B. Invention Subject to Confirmation (hereinafter referred to as Invention for Review)

The invention for review herein relates to a “toilet partitioning plate” specified by the defendant, who is the appellant, and its descriptions and drawings are as shown in the Appendix.

C. Prior Arts[3]

1) Prior Art 1 (Defendant's Exhibit 3)[4]

It relates to a “core for toilet and shower room partition” publicized on March 14, 1996 and published in the Utility Model Gazette No. SIL1996-0002102.

2) Prior Art 2 (Defendant's Exhibit 4)

It relates to a “plastic door and manufacturing process thereof” publicized on November 25, 1998 and published in the Utility Model Gazette No. TEUK1998-082136.

3) Prior Art 3 (Defendant's Exhibit 5)

It relates to a “flash panel” publicized on July 28, 1998 and published in Japan Publicized Patent Gazette No. TEUKGAEPYEONG 10-193491.

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3) As whether the invention for review is a freely exploited invention or not is not to be determined as shown in the below, detailed description about the prior arts will be omitted.

4) Although the substance of Prior Art 1 is an idea, it is specified herein as “invention” for the sake of convenience.

D. IPTAB Decision

1) On September 23, 2016, the defendant filed a petition for a defensive confirmation trial for the scope of rights against the plaintiff who is the patent holder of the claimed invention at issue, arguing that the invention for review does not fall within the scope of rights on the Claim 1 and 2 inventions at issue.

2) The IPTAB heard said petition as 2016Dang2923, and granted the defendant's petition on August 22, 2017 for reasons that "The invention for review neither features Element 5 of Claim 1 invention for issue, nor is it an indirect infringement thereof. Consequently, the invention for review falls neither within the scope of rights on the Claim 1 invention at issue, nor the scope of rights on the Claim 2 invention at issue, which is a dependent claim invention of Claim 1 invention at issue".

[Factual Basis] Statements in Plaintiff's Exhibit 1, 2 and 3, Defendant's Exhibit 3, 4 and 5, and purport of the overall argument

2. Whether the IPTAB Decision is in Error

A. Summary of the Parties' Arguments

1) Summary of Plaintiff's Arguments

A) If the bottom surface of the toilet partitioning plate of the invention for review is finished elaborately, requiring no installation of PVC edge on the bottom of the toilet partitioning plate, it can be said that the bottom of the waterproofing component of the invention for review performs the same function as the PVC edge of the Claim 1 invention at issue. Therefore, the invention for review falls within the

scope of rights on Claim 1 and 2 inventions at issue, as it is in an equivalent relationship with them.

B) Even if it is not, based on the empirical rule, as there is no such case in which the toilet partitioning plate of the invention for review which does not contain a PVC edge of Claim 1 invention at issue is used for purposes other than a toilet partition, or the waterproofing component inside the toilet partition with no PVC edge is installed in such a manner that the component is exposed to the outside with no further treatment, and as the toilet partitioning plate of the invention for review is not used for purposes other than the manufacture of a toilet partitioning plate within the scope of rights on the claimed invention at issue, the toilet partitioning plate of the invention for review is deemed to be an item used only for the manufacture of items for the Claims 1 and 2 inventions at issue, and therefore, the manufacture of a toilet partitioning plate of the invention for review can be classified as an indirect infringement as specified in subparagraph 1 of Article 127 of the Patent Act.

C) Therefore, given that the invention for review falls within the scope of rights on the Claim 1 and 2 inventions at issue, the IPTAB decision differing from the analysis herein is in error.

2) Defendant's Arguments

A) Since the bottom surface of the waterproofing component of the toilet partitioning plate of the invention for review is not an element corresponding to the PVC edge of the claimed invention at issue, and no element that substitutes or has modified said PVC edge element exists in the invention for review, the invention for review is not in an equivalent relationship with the claimed invention at issue.

B) Given not only that the toilet partitioning plate of the invention for review has a separate, independent, commercial and economic value rather than being used for the manufacture of products

of the claimed invention at issue, performs a perfect waterproofing function even without the PVC edge element, shows no problem to be released as an independent product, and has actually been installed in the market without the PVC edge, but also that a toilet partitioning plate in the shape that has no PVC edge is a publicly known art, indirect infringement cannot be established.

C) Toilet partitioning plates with no PVC edge such as the invention for review belong to freely exploited art that can be easily exploited from prior arts published before the filing date of application of the claimed invention at issue.

D) Therefore, given that the invention for review does not fall within the scope of rights on the Claim 1 and 2 inventions at issue, the IPTAB decision consistent with the analysis herein shall be upheld.

B. Whether the Invention for Review Falls within the Scope of Rights on Claim 1 Invention at Issue

1) Element-by-element Comparison

Elements of the Claim 1 invention at issue can be compared with the corresponding elements of the invention for review as follows.

2) Commonalities and Differences

A) Preamble

Element	Claim 1 Invention at issue	Invention for review
Preamble	Toilet partitioning plate used to manufacture a toilet door (100) attached to the left end as an element of the toilet partition,	Toilet partitioning plate used to manufacture a toilet door (100) attached to the left end as an element of the toilet partition,

Element	Claim 1 Invention at issue	Invention for review
	toilet door (102) attached to the right end, toilet door (104) installed between the middle plates, left end (110) installed on the left wall, right end (112) installed on the right wall (114), left plate (120) installed on the left wall, right plate (122) installed on the right wall, and middle plate (124) installed between the left plate (120) and the right plate (122)	toilet door (102) attached to the right end, toilet door (104) installed between the middle plates, left end (110) installed on the left wall, right end (120) installed on the right wall (114), left plate (120) installed on the left wall, right plate (122) installed on the right wall, and middle plate (124) installed between the left plate (120) and the right plate (122)
1	Inner core (10) of the toilet partitioning plate	Particleboard (10) of the toilet partitioning plate
2	Waterproofing component (40) mounted on the bottom of the inner core (10), which is made of a material selected from among synthetic resin, synthetic resin impregnated plate, aluminum, stainless steel, steel and ceramic	Waterproofing component (30) mounted on the bottom of the particleboard (10), which can be made of various kinds of waterproofing materials such as polyester panel or foam rubber
3	Water-based adhesive coating layer (50) coated on the front, rear, left and right sides of the inner core (10); oil-based adhesive coating layer (52) coated on the front, rear, left and right sides of the waterproofing component (40)	Water-based adhesive coating layer (40) coated on the front, rear, left and right sides of the particleboard (10); oil-based adhesive coating layer (50) coated on the front, rear, left and right sides of the waterproofing component (30)
4	Exterior surface material (20) attached to the front, rear, left and right sides of the coating layer	Melamine film (20) attached to the front, rear, left and right sides of the adhesive layer
5	PVC edge (30) attached to the bottom surface of the waterproofing component (40)	**<No corresponding element>**

The preamble elements of the Claim 1 invention at issue and the corresponding elements of the invention for review are identical to each other in that they relate to the toilet partitioning plate used to manufacture a toilet door (100) attached to the left end as an element of the toilet partition, a toilet door (102) attached to the right end, a toilet door (104) installed between the middle plates, a left end (110) installed on the left wall, a right end (112) installed on the right wall (114), a left plate (120) installed on the left wall, a right plate (122) installed on the right wall, and a middle plate (124) installed between the left plate (120) and the right plate (122).

B) Element 1

Element 1 and the corresponding element of the invention for review are identical to each other in that both of them relate to the inner core (particleboard)[5] of the toilet partitioning plate.

C) Element 2

Element 2 and the corresponding element of the invention for review have no difference in that both of them relate to the waterproofing component mounted on the inner core (particleboard), which is made of waterproof synthetic resin (polyester panel or foam rubber).

D) Element 3

Element 3 and the corresponding element of the invention for review have no difference in that both of them relate to the water-based adhesive coating layer (water-based adhesive layer) coated on the front, rear, left and right sides of the inner core (particleboard) and the oil-based adhesive coating layer (oil-based adhesive layer) coated on the front, rear, left and right sides of the waterproofing component.

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5) The statement in parentheses refers to the element of the invention for review corresponding to the Element of the Claim 1 invention. Hereinafter the same shall apply to the comparison between Claim 1 invention and the invention for review.

E) Element 4

Given that the specifications of the claimed invention at issue state that “For the toilet partitioning plate of this invention, it is desirable to use plywood or wood for the inner core (10), and high pressure compressed melamine film for the exterior surface material (20). It is also desirable to coat the front, rear, left and right sides of the inner core with a water-based adhesive to attach the exterior surface material.” (refer to lines 39, 40, and 41 on page 3 of Plaintiff's Exhibit 2), Element 4 and the corresponding element of the invention for review have no difference in that both of them relate to the external surface material (melamine film) attached to the front, rear, left and right side of the coating layer.

F) Element 5

There is a difference between the inventions in that Element 5 relates to a PVC edge attached to the bottom surface of the waterproofing component, while the invention for review does not have an element corresponding thereto. Due to such difference, the Claim 1 invention at issue is expected to produce effects, such as ① PVC edge attached to the bottom surface of the waterproofing component can enhance the finishing quality and waterproof function of the bottom of the partitioning plate; ② PVC edge attached to the bottom surface of the waterproofing component can block the waterproofing component coated with oil-based adhesive and the external surface material from the toilet floor to prevent water or moisture on the toilet floor from permeating into them. On the other hand, such effects cannot be expected from the invention for review as it does not have any element corresponding thereto.

3) Specific Discussion

To argue that the Claim 1 invention at issue and the invention for review have equivalent elements, substitution or modification of elements corresponding to the Claim 1 invention at issue is required.

However, as reviewed above, as the invention for review does not have any element that corresponds to Element 5 of the Claimed invention at issue, which is the PVC edge, it is hard to see that the invention for review is in an equivalent relationship with the Claim 1 invention at issue.

With regard to this, the plaintiff is arguing that the bottom surface of the waterproofing component of the invention for review is an element corresponding to the PVC edge of the Claim 1 invention. However, the bottom surface of the waterproofing component of the invention for review only has the same composition of elements as the bottom surface of the waterproofing component of the Claim 1 invention, but does not have an element corresponding to the PVC edge of the Claim 1 invention, and therefore, the aforementioned plaintiff's argument is not well grounded.

C. Whether the Invention for Review Indirectly Infringes the Claim 1 Invention at Issue

1) Indirect Infringement and Confirmation Trial for Scope of Rights

Given that Article 135 of the Patent Act stipulates that the patent holder may request a trial to confirm the scope of rights on his or her patent to check the scope of patent protection, and Article 127 of the Patent Act stipulates that where a patent relates to an invention of an item, the production, transfer, lease or import of an item used only for the exploitation of the invented item or the act of offering the transfer or lease thereof as a business shall be deemed as an infringement of the patent, the patent holder may designate an item used only for the exploitation of the invented item as an invention subject to petition for trial to determine whether such item falls within the scope of protection for the patent (refer to Supreme Court Decision 2003Hu1109

rendered on July 15, 2005).

In addition, subparagraph 1 of Article 127 of the Patent Act specifying indirect infringement can be interpreted as stipulating that where a conduct of the previous stage is made rather than exploiting an item having all elements of invention, but it is highly probable that the item having all elements of invention can be exploited, it should not be considered as unjust expansion of patent even if such exploitation is deemed as an infringement of the patent under certain requirements so as to increase the effectiveness of relief against future patent infringement. Given the context and purport of said provision, as the manufacture mentioned herein encompasses all kinds of acts of inventing an item having all elements of invention using the other item lacking some of the elements of invention, such act of invention should include not only industrial manufacture but other acts such as processing or assembly, and the outcome of manufacture should be the same as all elements, or consist of all equivalent elements, or use all of them. Furthermore, to be classified as an "item only used for the manufacture of a patented item," such item should not have any other economic, commercial or practical purposes that can be commonly used or socially acceptable. On the other hand, for an item simply having theoretical, experimental or temporary usability for an item other than a patented item, it cannot be said that such item has another intended use to deny the establishment of indirect infringement (refer to Supreme Court Decision 2007Hu3356 rendered on September 10, 2009). In addition, the argument that the item at issue is such that is used only for the manufacture of a patented item should be demonstrated and proven by the patent holder (refer to Supreme Court Decision 2000Da27602 rendered on November 8, 2002).

2) Whether the Invention for Review is What is Used for the Manufacture of the Claim 1 Invention at Issue

As discussed above, the invention for review corresponds with the

Claim 1 invention in that said invention contains all elements of the Claim 1 invention at issue with the exception of the PVC edge. Although the invention for review shows a difference from the Claim 1 invention at issue in that said invention does not have an element corresponding to Element 5 of the Claim 1 invention at issue, which is a PVC edge, if the toilet partitioning plate of the Claim 1 invention at issue is formed through the use of the item of the invention for review, such case is considered the 'manufacture' of a patented item as set forth in subparagraph 1 of Article 127 of the Patent Act.

Through a comprehensive consideration of statements and videos in Plaintiff's Exhibit 4 or 7 and Defendant's Exhibit 1 as well as the purport of the overall argument, although it is acknowledged that the defendant is manufacturing and selling the item of the invention for review, it is hard to see that the PVC edge is attached to the bottom surface of the waterproofing component of the final toilet partitioning plate product for which the toilet partitioning plate based on the invention for review is used as a part, and there is no evidence that can demonstrate such argument. Rather, the statement in Defendant's Exhibit 2 demonstrates that the plaintiff's website has posted drawings or photos of an installed toilet partitioning plate for bottom waterproofing, in which the PVC edge is not attached to the bottom surface of the waterproofing component. Therefore, it is hard to conclude that the item of the invention for review is used for the manufacture of an item of the Claim 1 invention at issue.

3) Whether the Item of Invention for Review is Used Only for the Manufacture of an Item of the Claim 1 Invention at Issue

Even if the item of the invention for review is used for the manufacture of an item of the Claim 1 invention at issue, given that ① the plaintiff is only arguing based on his experience that the item of the invention for review cannot be used as a partition in a waterless environment other than the toilet and all partitioning plates for prefabricated toilets feature finishing materials such as a PVC edge at

the bottom, but has never submitted any objective data to demonstrate his argument; ② rather, the toilet partitioning plate of the invention for review is used for the construction of toilets and even the plaintiff himself has introduced on his website a toilet partitioning plate for bottom waterproofing, which appears to have no PVC edge attached to the bottom surface of the waterproofing component, it is considerably reasonable to understand that the toilet partitioning plate of the invention for review with no PVC edge attached on the bottom surface of the waterproofing component seems to have its own use as well as other economic, commercial or practical uses that are commonly used and socially acceptable and there is no evidence to demonstrate that said item is used only for the manufacture of the toilet partitioning plate of the Claim 1 invention at issue or simply has theoretical, experimental or temporary usability for any item other than said patented item. Therefore, it is hard to say that the item of the invention for review is such that is used only for the manufacture of the item of the Claim 1 invention at issue.

4) Summary of Analysis

Thus, as the manufacture of the item of the invention for review cannot be deemed as an act of manufacturing an item used only for the item of the Claim 1 invention at issue, said manufacture is not an indirect infringement of the Claim 1 invention at issue.

D. Whether the Invention for Review Falls within the Scope of Rights on Claim 2 Invention at Issue

1) Designation of Invention for Review

With regard to filing a petition for confirmation trial for the scope of rights on a patent, an invention for review subject to a petition for trial should be specified in sufficient detail to compare with a patented

invention at issue. Although it is not necessary to state all elements of the invention for such specification, at a minimum it is required in principle to state specific elements corresponding to the elements of the patented invention to the extent needed to compare differences (refer to Supreme Court Decision 2003Hu656 rendered on April 29, 2005 and Supreme Court Decision 2004Hu486 rendered on September 29, 2005). However, even though corresponding elements to the elements of the patented invention are partially missing or vague in the descriptions of the invention for review, if it is possible to determine whether the invention for review falls within the scope of rights on the patented invention with only the remaining elements stated, it is reasonable to deem that the invention for review is properly specified (Supreme Court Decision 2010Hu296 rendered on May 27, 2010).

With regard to this case, even though the top section of the waterproofing component and the bottom section of the particleboard of the invention for review corresponding to the top section of the waterproofing component and the bottom section of the inner core of Claim 2 invention at issue are not stated in the descriptions of the invention for review, as shown in Paragraph C-2 below, since it appears to be possible to determine only with the remaining elements stated that the invention for review does not fall within the scope of rights on the patented invention, it would be reasonable to see that the invention for review is sufficiently properly specified to compare with the Claim 2 invention at issue.

2) Whether the Invention for Review Falls within the Scope of Rights on the Claim 2 Invention at Issue

As shown above, unless the invention for review falls within the scope of rights on the Claim 1 invention at issue, the invention for review also does not fall within the scope of rights on the Claim 2 invention at issue, which is a dependent claim that not only contains

all elements of the Claim 1 invention, but specifies said claim by technically limiting it.

E. Summary of Discussion

Therefore, given that the invention for review does not fall within the scope of rights on the Claim 1 and 2 inventions at issue, the IPTAB decision consistent with the analysis herein shall be upheld.

3. Conclusion

Thus, it is not necessary to further discuss the defendant's arguments for freely exploited invention, and the plaintiff's petition to revoke the IPTAB decision is without merit and therefore dismissed as previously ordered.

Presiding	Judge	Seungryul SEO
	Judge	Yunhyung JEONG
	Judge	Donggyu KIM

[Appendix] Invention for Review

[Title of Invention Subject to Confirmation]

Toilet partitioning plate

[Brief Description of Drawings]

Drawing 1: Floor plan of the toilet partition in which the invention for review is installed

Drawing 2: Cross-sectional view of the invention for review

Drawing 3: Perspective view of the invention for review with the melamine film (20) removed from the bottom end

Drawing 4: Flow chart describing the manufacturing process of the invention for review

Drawing 5: Depiction of the particleboard (10) of the invention for review, to which a melamine film (20) is attached

Drawing 6: Photo of product in which the invention for review is exploited

[Detailed Description of Invention for Review]

The invention for review relates to a toilet partitioning plate, which can prevent water or moisture on the toilet floor from permeating through the bottom of the toilet partitioning plate in order to prevent said plate from decomposing or being damaged by water or moisture.

Drawing 1 is a floor plan of a toilet partition, which shows that the toilet partition is built using toilet partitioning plates manufactured according to the invention for review. Generally, a toilet partition consists of a toilet door (100) attached to the left end (110), a toilet

door (102) attached to the right end (112), a toilet door (104) installed between the middle plates (114), a left end (110) installed on the left wall, a right end (112) installed on the right wall, a middle plate (114) installed between the toilet doors, a left plate (120) installed on the left wall, a right plate (122) installed on the right wall, and a middle plate (124) installed in the middle of the right plate (122) and the left plate (120). The invention for review is used to manufacture such partitioning plates (100, 102, 104, 110, 112, 114, 120, 122, and 124).

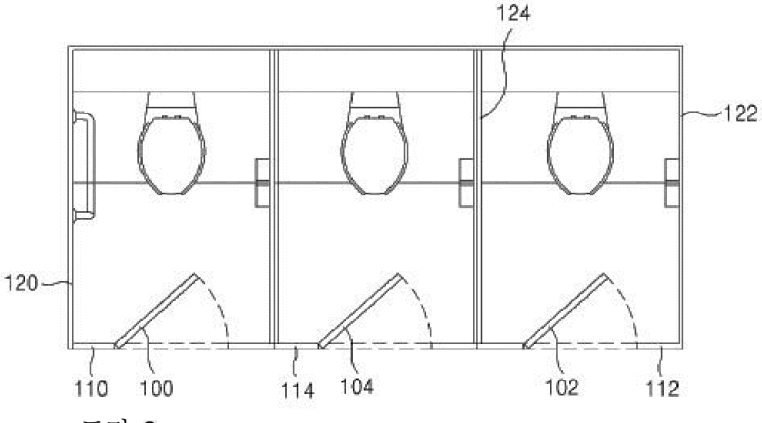
According to Drawings 2 and 3, the invention for review consists of a piece of particleboard (10), a waterproofing component (30) mounted on the bottom of the particleboard (10), a water-based adhesive layer (40) coated on the surface of said particleboard (10), an oil-based adhesive layer (50) coated on the surface of said waterproofing component (30) and a melamine film (20) attached to said adhesive layers (40, 50). The waterproofing component can be made of various kinds of waterproof materials such as polyester panel or foam rubber. The invention for review does not feature a PVC film or other subsidiary material additionally attached to the bottom surface of the waterproofing component.

For reference, procedures to manufacture the invention for review can be described as shown in Drawing 4. First, in Step S1, apply the water-based adhesive (40) on the surface of the particleboard (10). There is no specific limitation on the method used to apply the adhesive, but it is desirable to pass the particleboard (10) through rollers to which the water-based adhesive is supplied. Next in Step S2, attach a melamine film (20) to the surface of the particleboard (10) on which a water-based adhesive layer (40) is formed. As shown in Drawing 5, stretch the melamine film (20) to the point where the waterproofing component (30) is combined with the bottom of the particleboard (10). In Stage S3, apply an oil-based adhesive on the bottom of the particleboard (10) to which the waterproofing component is to be attached to form oil-based adhesive layer (50). Apply the oil-based adhesive in the arrow direction shown on Drawing 5.

Although there is no specific limitation on the method used to apply the adhesive, it is desirable to spray the adhesive to form an oil-based adhesive layer (50). Next in Step S4, attach the waterproofing component (30) to the oil-based adhesive layer (50). In Step S5, compress the partitioning plate with a press machine and cut it to a necessary size.

Through such elements of the invention for review, it is possible not only to manufacture toilet partitioning plates using simpler procedures but also to prevent water or moisture on the toilet floor from permeating into the bottom of the plate to prevent damage to it.

도면 1



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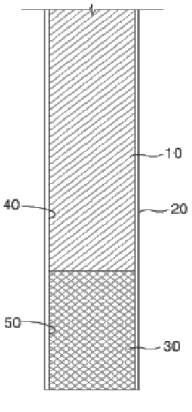

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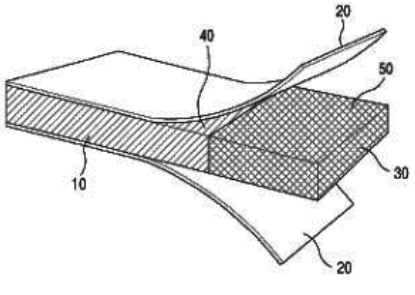

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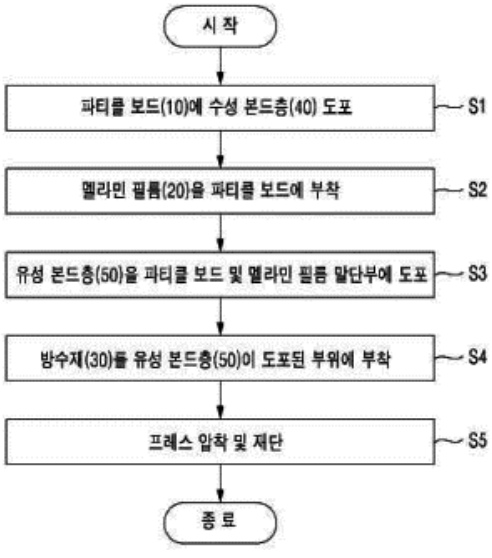
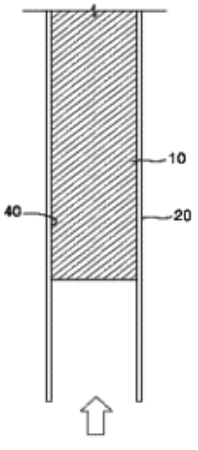
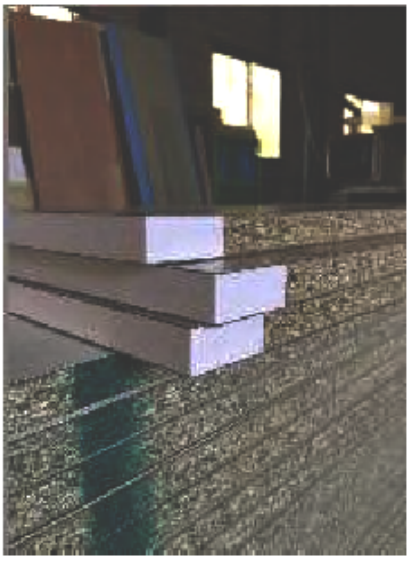


도면 5



Start
Apply a water-based adhesive layer (40) on the particleboard (10)
Attach a melamine film (20) on the particleboard
Apply an oil-based adhesive layer (50) on the end part of the particleboard and melamine film
Attach a waterproofing component (30) on the area to which the oil-based adhesive layer (50) is applied
Press compressing and cutting
End

도면6



<Reference Numerals>

10: Particleboard 20: Melamine film 30: Waterproofing component 40: Water-based adhesive layer 50: Oil-based adhesive layer 100, 102, 104: Toilet door 110: Left end 112: Right end 114: Middle plate 120: Left plate 122: Right plate 124: Middle plate End

PATENT COURT OF KOREA
SECOND DIVISION
DECISION

Case No.: 2018Heo4874 Invalidation of Registration (Patent)

Plaintiff: A

Defendant: B

Date of Final Trial: September 11, 2018

Decision Date: October 11, 2018

ORDER

1. The plaintiff's claim is dismissed.

2. The plaintiff shall bear the cost arising from this litigation.

PLAINTIFF'S DEMAND

The IPTAB Decision 2018Dang519 dated May 30, 2018, shall be revoked.

OPINION

1. Background

A. Defendant's Patented Invention at Issue (hereinafter the "Subject Invention") (Plaintiff's Exhibits 1 & 2)

1) Title of Invention: Method for manufacturing nail stickers

2) Filing Date of Application/ Date of Registration/ Registration Number: February 25, 2016/ April 13, 2017/ Patent No. 1728432

3) Claims (as petitioned for correction[1] on April 27, 2018)

[Claim 1] (Deleted)

[Claim 2] A method of manufacturing nail stickers, consisting of a step of applying ink (20) on a base film (10) by printing ("Element 1"); a step of applying UV coating solution (30) on the ink (20)-applied base film (10) ("Element 2"); a step of attaching a PET film (40) on the base film (10) to cover the ink (20) and the UV coating solution (30) thereon ("Element 3"); a step of compressing the PET film (40) and the attached base film (10) with compressing rollers (50) ("Element 4"); a step of drying the compressed nail sticker with a UV dryer upon the above compression step ("Element 5"); a step of removing the PET film (40) from the above base film (10) ("Element 6"); and a step of cutting the PET film (40)-removed nail stickers into a specific size ("Element 7"); wherein the step of applying ink (20) on said base

1) The petition was to delete Claim 1.

film (10) by printing consists of applying either pearl or glitters on the base film (10) (“the Element 1-1”).

4) Summary of Invention

(A) Technical Field

[0001] The Subject Invention relates to a method of manufacturing nail stickers. More specifically, it relates to a method of manufacturing nail stickers by which a base film applied with ink is compressed by compressing rollers.

(B) Background Art and Problem

[0002] “Stickers for Nail and Manufacturing Method Thereof” is described under the patent KR 10-1413858 (registered on June 24, 2014), which is registered in Korea.

[0004] However, the above method of manufacturing nail stickers generates flat light, and a process for preventing ink from smearing is not introduced.

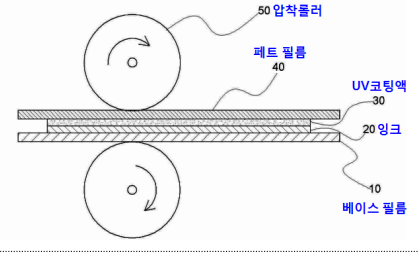
(C) Problem to Be Solved

[0005] Accordingly, an objective of the present invention is to provide a method of preventing ink from smearing by compressing the base film with compressing rollers after it is ink-printed and attached with a PET film. In this way, bubbles contained in ink are removed, and the compressed film generates flat light. When pearls or glitters are used instead of ink for printing, the compressing roller presses the pearls or glitters ensuring a smearing-free process.

(D) Content of Invention

[0019] As shown in Fig. 1 or 5, the present invention comprises: a step of applying ink (20) on a base film (10) as the printing method; a step of applying UV coating solution (30) on the ink(20)-applied base film (10); a step of attaching a PET film (40) to the base film (10) to cover the the ink (20)

<Fig. 4> Side cross-sectional view of the compressing process



and the UV coating solution (30) thereon; a step of compressing the PET film (40) and the attached base film (10) with compressing rollers (50); a step of drying the nail stickers wherein the nail stickers compressed upon the above compression step pass through a UV dryer; a step of removing the PET film (40) from the above base film (10); and, a step of cutting the PET film(40)-removed nail stickers into a specific size.
[0020] During the step of applying ink (20) to the base film (10) by printing, pearls or glitters can be used instead of ink.
[0022] The above method of the present invention removes air bubbles from ink (20) by pressing the ink(20)-printed layer of the base film (10) with pressing rollers (50) to provide an effect of generating flat light, and prevents smearing if pearls or glitters are used instead of ink by pressing the printed layer with compressing rollers (50).

B. Prior Arts

1) Prior Art 1 (Plaintiff's Exhibit 8)

It is about the "Method of Manufacturing Nail Stickers" which was disclosed under Publication No. 2011-109165 dated October 6, 2011, the contents of which are as follows.

(A) Technical Field
[0001] The present invention relates to a method of nail stickers which are attached to nails to add aesthetic effects. Specifically, the invention relates to a manufacturing method enabling the following: a sticker fabric of various colors, patterns, and shapes, with mixed PVC resin and xylene, can be harmonically combined with the inner rounding part of the nail; the outside of the nail sticker is easily removable according to the shape of the fingernail so that it is convenient and easy to attach and remove; a nail sticker capable of an aesthetic appeal.

(B) Technical Problem
[0005] Although the stickers can be attached to the nails as ornaments,

most of them are flat and simple and have a disadvantage that they are unpleasant to touch.
[0006] Therefore, the demand is high on a nail sticker which can offer following advantages: (1) nail stickers in a variety of pictures, patterns, and colors so that they can enhance the visual appearance reflecting individual user's unique style; (2) it is a sticker type so that it can be more easily tailored to individual tastes; (3) if the attached nail sticker is not harmonized with nails, or the user gets bored of the nail sticker, the sticker can be easily removed and reattached any time; (4) nail stickers having good nail art printing to maintain proper thickness and improve appearance by maintaining color and design sharpness; and, (5) low manufacturing cost to reduce the burden on the purchase price.

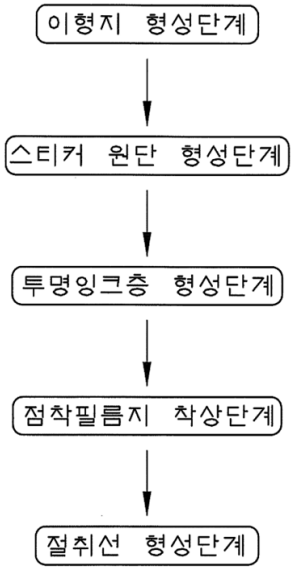
(C) Problem to Be Solved
[0007] The present invention of a method of manufacturing nail stickers aims to meet the above demands.
[0009] The present invention involves the following steps: (i) adhesive is applied to a release sheet; (ii) adhesive is applied to the release sheet, and then a sticker fabric in various colors combining PVC resin and xylene is applied thereto; (iii) the sheet is coated with clear ink; (iv) a clear adhesive film is compressed against the sheet with rollers; (v) the compressed sheet is cut in various patterns and shapes; and, (vi) the sticker fabric and the adhesive film are separated from the release sheet.
The finished product (the nail sticker) is then attached to the user's nails along the inner rounding part of the nail while the outer part of the sticker can be easily removed along the outline of the shape of the nail. By removing the adhesive film from the sticker, users can easily attach the sticker on their nails. Another purpose of the nail stickers is to have an aesthetic appeal.

(D) Solution to the Problem
[0010] (i) A step of forming a release sheet by applying (screen process) aqueous adhesive to the surface of a release sheet to form an adhesive layer and then drying it at 70℃ for 40 seconds; (ii) a step of forming a sticker fabric layer (2) by screen transfer of a mixture of 30% PVC resin and 70% xylene to the above adhesive layer and then drying it at 70℃ for 40 seconds; (iii) a step of forming a clear ink layer by screen application

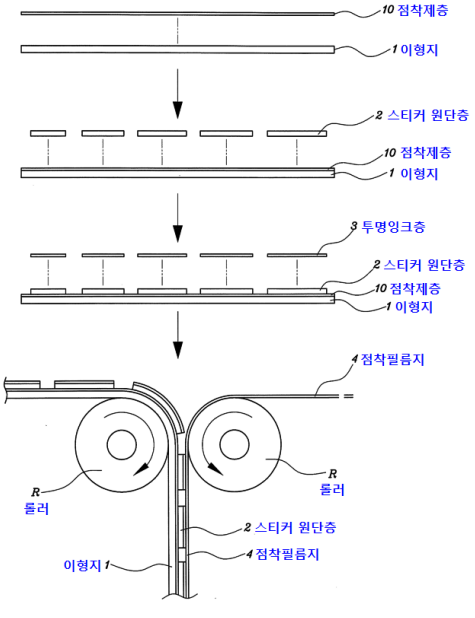
of clear ink to the above sticker fabric layer and then it at 70℃ for 40 seconds; (iv) a step of forming a laminated film by attaching a clear adhesive film to the above clear ink layer and then compressing it with rollers at 30㎏/㎠; (v) a step of forming perforated lines for user convenience on the stack of the above release sheet, the sticker fabric layer, the clear ink layer, and the adhesive film in the preceding order.

[0011] Preferably, the compound constituting the above sticker fabric layer shall enable the expression of various colors. With the above steps being the features of the composition, the above objective can be achieved.

[Fig. 1] Manufacturing Flowchart



[Fig. 4] Manufacturing Processes



2) Prior Art 2 (Plaintiff's Exhibit 9)

The invention relates to a “Method of Manufacturing Glitter Embossed Stickers” which was disclosed under Publication No. 1998-33311 dated July 25, 1998, the contents of which are as follows.

(A) Technical Field and Related Art

The present invention relates to a method of manufacturing decorative glitter embossed stickers to provide decorative effects to backpacks, school supplies, or doll stickers by: embossing patterns in the sticker during the manufacturing process and mixing glitter resins in UV (ultraviolet) ink during printing.

The conventional rub-on stickers are manufactured in such a way that an adhesive is applied on a release sheet, then the release sheet is heat treated to dry its surface. While in the drying oven, the adhesive is hardened resulting in an uneven surface. Once dried, a transfer sheet is stacked on the release sheet and bonded together by compressing rollers. The sticker inside the transfer sheet is thinly formed without any cubic effect, and the bonded surface is uneven. As a result, when the release sheet is removed from the transfer sheet (a clear protective tape) to rub on the sticker against an object, the sticker often comes off with the transfer sheet especially when an unskilled person rubs the surface of the transfer sheet while the sticker is placed against an object to rub on. When the sticker is used on paper doll clothes, children get upset when part of the sticker falls off. Even if the sticker is entirely rubbed on an object, it has no embossings that provide decorative or visual effects.

(B) Technical Problem

The present invention addresses the above weakness of conventional stickers by forming the sticker by adding luminous pigments and fragrance, mixed or separate, during the manufacturing process, UV printing resin partially mixed with glitters, and UV drying to produce glitter embossed stickers.

(C) Composition of Invention

Example 1: After planning and designing a sticker on a design paper, the design paper goes through the film and on-press processes. The adhesive is applied to a release sheet (a coated sheet, film, or cellophane) and the release sheet is dried (naturally cooled or force-dried by heatwave) and color printed. If more than one color is used in printing, the release sheet is dried after printing in each color. It is then printed again using glitter resin (metallic) and silk-screen UV ink. To remove any air bubble generated during printing and to let the UV ink spread evenly, the sheet is aged for 3-5 minutes at room temperature. Upon aging and UV drying, the sheet is UV-ink printed, and UV dried repeatedly to have the embossing effect.

Example 3: During the manufacturing process of glittering and embossing stickers under Example 1 and Example 2, glitters (metallic) are added to the ink during the color printing or UV printing process and printed by offset and silkscreen printing, or sealing and silkscreen printing to produce glittering and embossing stickers.

C. IPTAB Decision (Plaintiff's Exhibit 3)

1) The plaintiff filed an action before the Patent Court on February 23, 2018 to invalidate patent registration of the defendant (2018Dang519), claiming that "a person having ordinary skill in the art ("skilled person") would have easily come up with the invention at issue based on Prior Arts 1, 2 and the patent under Publication No. 1992-610 published on January 17, 1992, and therefore the invention at issue lacks an inventive step."

2) On April 27, 2018, the defendant made a petition for correction by which Claim 1 is deleted from the claim construction of the Subject Invention during the patent invalidation trial procedure.

3) On May 30, 2018, the Patent Court upheld the correction on the grounds that "the petition for correction made by the defendant is lawful, and the inventive step of the invention described in Claim 2 ("Invention under Claim 2") cannot be denied even by Prior Arts 1, 2 and the patent under Publication No. 1992-610,"[2] and dismissed the plaintiff's claim to revoke the IPTAB decision.

2) It corresponds to Cited Art 1 in the IPTAB case, which was not submitted in this case as a prior art.

[Factual Basis] Undisputed facts, statements in Plaintiff's Exhibits 1 to 3, 8 and 9, and the purport of the overall argument

2. Whether IPTAB Erred

A. Summary of Plaintiff's Argument (for Revocation of IPTAB Decision)

For the following reasons, the Invention under Claim 2 must be invalidated as it not only lacks an inventive step but also fails to satisfy the written description requirements. Therefore, the IPTAB decision ruling to the contrary is erroneous and shall be revoked.

1) Prior Art 1 involves various processes in the sequence of 'the application of clear ink → heat treatment for drying → compression by rollers.' Claim 2 involves processes in the sequence of 'the application of UV coating solution → compression by rollers → UV drying.' The only difference between these two lies in the sequence of 'compression' and 'drying.' The difference is inevitable since the latter adopts UV coating as the method of coating. Otherwise, the clear ink under Prior Art 1 has the same purpose as the UV ink under Claim 1, and the UV ink printing and the UV drying processes are disclosed in Prior Art 2. As such, it is easy for a skilled person to replace the clear ink under Prior Art 1 with the UV ink. In other words, the Invention under Claim 2 is what a skilled person would have easily derived from Prior Arts 1 and 2.

2) Element 1-1 is interpreted as "mixing" of pearl/glitter in ink printing, whereas the description of the invention is stated as "substituting" ink with pearl/glitter. Thus the claim construction

is not supported by the explanation of the invention. As a result, Claim 2 does not satisfy the written description requirements under Article 42(4)(i) of the Patent Act.

B. Whether Claim 2 Lacks an Inventive Step

1) Element-by-element Comparison with Prior Art 1

Element	Claim 2	Prior Art 1 (Plaintiff's Exhibit 8)
1	[A method for manufacturing nail stickers, consisting of:] a step of applying ink (20) to a base film (10) for printing;	A mixture of PVC resin and xylene is transfer-printed on an adhesive layer (10) of a release sheet (1) to form a sticker fabric layer (2), and the fabric layer (2) is dried at 70°C for 40 seconds. (See Paragraphs [0020] to [0022])
2	a step of applying UV coating solution (30) on the ink(20)-applied base film (10);	Clear ink is screen-printed on a sticker fabric layer (2) to form a clear ink layer (3), and the ink layer (3) is dried at 70°C for 40 seconds. (See Paragraph [0024])
3	a step of attaching a PET film (40) to the base film (10) to cover the ink (20) and the UV coating solution (30) thereon;	A clear adhesive film (4) is implanted on the clear ink layer (3) that is attached to the sticker fabric layer (2). (See Paragraph [0026])
4	a step of compressing the PET film(40)-attached base film (10) with rollers;	The clear adhesive film(4) is compressed with rollers upon implantation. (See Paragraph [0026])
5	a step of drying the compressed nail sticker with an UV dryer upon the above compression step;	
6	a step of removing the PET film (40) from the above base film (10);	The clear adhesive film (4) is separated. (See Paragraph [0028])

Element	Claim 2	Prior Art 1 (Plaintiff's Exhibit 8)
7	a step of cutting the PET film(40)-removed nail stickers into a specific size;	A step of forming perforated lines for user convenience while the release sheet, the sticker fabric layer, the clear ink layer, and the adhesive film are stacked in the preceding sequence. (See Paragraph [0010])
8	wherein, during the step of applying ink (20) to the base film, either pearls or glitters are applied to the base film (10).	

2) Commonalities and Differences

A) Element 1

Element 1 and the corresponding element in Prior Art 1 are the same in that they apply (screen transfer) ink (a mixture of PVC resin and xylene) to a base film (the release sheet).

B) Element 2

Element 2 and the corresponding element in Prior Art 1 are the same in that they apply UV coating solution (a clear coating) over the ink applied to the sticker fabric layer.

C) Elements 3 and 4

Elements 3 and 4 and the corresponding elements in Prior Art 1, respectively, are the same in that the UV coated (the clear ink layer) layer laminated with a PET film (a clear adhesive film) is compressed with rollers.

D) Element 5

Element 5 describes the step where the compressed nail stickers are dried. Claim 2 involves the UV coating compression step under

Element 3 and then the drying step under Element 5. On the other hand, stickers in Prior Art 1 are first dried during the clear ink layer formation step(3) and then compressed. The difference ("the Difference") between these two lies in the order of "compression" and "drying."

E) Elements 6 and 7

Elements 6 and 7 and the corresponding elements in Prior Art 1, respectively, are the same in that the PET film (an adhesive film) is removed (separated) and nail stickers are cut in a specific size (to form perforated lines).

F) Element 1-1

Element 1-1 involves the application of pearls or glitters on the base film by printing, which has no corresponding element with Prior Art 1.

However, Prior Art 2 describes a composition where 'glitters (metallic) are mixed with ink during the color-ink printing or the UV-ink printing process to perform the offset and silk-screen printing.' (Refer to Page 2 of Plaintiff's Exhibit 9), which is the same as Element 1-1 of Claim 2 in that both inventions use glitters during the ink printing process. Also, they belong to the same technical field as Prior Art 2 is about the manufacturing method for nail stickers. As such, a skilled person would have easily combined Prior Art 1 and 2 to derive Element 1-1.

3) Whether Difference Can Be Easily Overcome

The Difference in the order of "compression" and "drying" between both inventions seems to be difficult for a skilled person to overcome easily for the following reasons under (A) or (B) as below.

A) Both inventions under Claim 2 and Prior Art 1 refer to "a method of manufacturing nail stickers," all of which are process inventions. A process invention is an invention made up of a series of

temporal steps for achieving a specific purpose. In the process invention, the order of discrete elements may cause a significant difference in working effects thus the temporal order is an essential element of the process invention. Therefore, the inventions under Claim 2 and Prior Art 1 are different from each other in their composition in that there is a difference in the order of 'compression' and 'drying' elements as described above. Moreover, the invention under Claim 2 has the core technical idea of adopting the order of 'drying after compression' as a means to achieve the goal of removing post-compression air bubbles contained in the printed layer, flattening the sticker surface to produce flat light, and preventing the smearing of ink, etc. It is difficult to see the difference in the time-series arrangement of the 'compression' and 'drying' elements of both inventions as no more than a simple change of the order, omission of existing steps, or replacement of other steps.

B) Regarding the effects of the Difference in the composition of the above inventions, the invention under Claim 2, according to its specification of the invention, has the effects of removing post-compression air bubbles contained in the printed layer, generating flat light, and preventing smearing of ink or others by sequentially applying ink and UV coating and then compressing with rollers.

[0004] However, the above method of manufacturing nail stickers does not introduce the process of generating flat light and preventing ink from smearing.
[0016] Accordingly, the present invention concerning the method of manufacturing nail stickers provides an effect of removing air bubbles contained in ink and generating flat light when ink is applied to a base film. Also, it provides an effect of preventing pearls or glitters from smearing when they are applied to a base film and compressed with rollers.
[0022] The above method removes air bubbles from ink (20) by compressing the ink(20)-printed layer of the base film (10) with

compressing rollers (50) to provide an effect of generating flat light, and prevents smearing if pearls or glitters are used instead of ink by compressing the printed layer with compressing rollers (50).

On the other hand, Prior Art 1 involves a process of applying ink and clear coating solution and immediately drying under a predetermined heat treatment condition, thereby drying and then compressing, and thus it is difficult to say that the process of removal of air bubbles contained in the printed layer and the flattening of the surface of the printed layer are facilitated by compression. The compression process with rollers during the sticker manufacturing process under Prior Arts 1 and 2 seems to be utilized for simple adhesion (bonding) rather than for removing air bubbles contained in ink as in the invention under Claim 2 as they state: (1) Prior Art 1 involves "a step of attaching a clear adhesive film to the above clear ink layer by compression with rollers at 30kg/cm^2" (Refer to Paragraph No. [0010] of Plaintiff's Exhibit 8) and (2) The method under Prior Art 2 involves.... "the conventional rub-on stickers ..... compressed by rollers for adhesion upon lamination." (Refer to P1 of Plaintiff's Exhibit 9).

C) Ultimately, the difference in compositions of Claim 2 and Prior Art 1 is substantial, and the resulting effects of the two are significantly different. Thus the difference in the order of 'compression' and 'drying' of the two inventions cannot be easily overcome by a skilled person.

4) Discussion on Plaintiff's Argument

A) The plaintiff argues that: "As the invention under Claim 2 adopts the UV coating, it is impossible to perform the compression process after the UV drying process, thus the compression process must be performed before the UV drying process; under Prior Art 1,

transparent coating solution is a concept including UV coating solution thus it has the same purpose as to the UV coating used in Claim 2; and, as the UV printing and UV drying are stated under Prior Art 2, it is easy to replace the clear ink under Prior Art 1 with UV coating."

However, the above claim of the plaintiff cannot be accepted for the following reasons.

① The plaintiffs' claim that "As the invention under Claim 2 adopts the UV coating, it is impossible to perform the compression process after the UV drying process, thus the compression process must be performed before the UV drying process," would have been acceptable only if it were based on the premise of the purpose of Claim 2, i.e., to remove air bubbles from the printed layer and flatten the surface by compression. However, when the 'compression' process is utilized for adhesion (bonding) only as in Prior Arts 1 and 2, contrary to the plaintiff's claim the compression process can come after UV drying.

② Although the clear coating solution is a concept including UV coating solution, as claimed by the plaintiff, Prior Art 1 adopts a method of compression after drying in all cases of using clear coating solution, but it does not suggest a specific method for UV coating solution involving the sequence of 'drying after compression.'

③ As mentioned above, the invention under Claim 2 and Prior Art 1 differ from each other in the order of arrangement of the elements constituting the process invention, and the difference cannot be regarded as mere substitution of the coating solution, and there is a significant difference in the effect thereof.

④ On the other hand, Prior Art 2 relates to a "method for manufacturing glitter embossed stickers" and does not have the elements corresponding to Elements 3 to 5 of Claim 2, namely a step of attaching a PET film, a compression step, and a drying step after compression. Thus there is a difference in the corresponding processes of both inventions. Regarding working effects, Prior Art 2 seems to enable an identical effect to that of the invention under Claim 2 of removing air bubbles generated during UV ink printing and flattening

the surface by performing the 'aging' process, which corresponds to the compression process under Claim 2. However, there is a difference in the practical method in that, while the method used in Claim 2 is "compression with rollers(50)," Prior Art 2 uses a method of "aging for 3-5 minutes naturally." By compression with rollers under Claim 2, air bubbles in ink can be removed, and the surface can be flattened quickly thereby improving the workability, and there is a significant difference in these effects when compared with Prior Art 2.

B) The plaintiff also asserts that "the effect of increasing the flat light and preventing pearls, etc., from smearing of the invention under Claim 2 is the effect of the UV coating itself, but not the effect of the 'compression before the drying process.'"

However, the above claim of the plaintiff cannot be accepted for the following reasons.

① There is no evidence that the effect of increasing the flat light and preventing pearls, etc., from smearing of the invention under Claim 2 is the effect of the UV coating itself, as claimed by the plaintiff.

② Rather, there is a statement concerning Prior Art 1 that "Having a clear ink layer(3) adds gloss and aesthetic effect and minimizes attachment of foreign matter, dust, etc., to the user's nail when the sticker fabric consisting of the sticker fabric layer(2) is used on the nail." (See Paragraph [0024] of Plaintiff's Exhibit 8). According to this statement, the mere effect of coating solution such as UV coating under Claim 2 is to polish and minimize attachment of foreign matters.

③ Also, as described above, the effect of the 'compression before drying' under Claim 2 cannot be negated just because there is a contribution of UV coating to the increase of the effect.

5) Summary of Analysis

As a result, the Difference between the inventions under Claim 2

and Prior Art 1 is something that a skilled person cannot easily overcome by Prior Arts 1 and 2, and thus the inventive step of Claim 2 is not denied by Prior Arts 1 and 2.

C. Whether Claim 2 Fails to Meet Written Description Requirement

1) Legal Principle

Article 42(4)(i) of the Patent Act stipulates that the description of the invention shall support the claim to be protected. The provision purports to prevent unjust consequences of granting patent rights to inventions that are not described in the description of the invention in the specification attached to the patent application but are described in the Claim. Therefore, whether or not the written description requirement is met shall be determined, in accordance with the purport of the above provision, based on whether the description contains the elements corresponding to what is claimed at the level of technology at the time of the patent application from the perspective of a skilled person. (Refer to Supreme Court Decision 2012Hu832, decided September 4, 2014; Supreme Court Decision 2014Hu2061, decided May 26, 2016).

2) Review under Article 42(4)(i) of Patent Act

Element 1-1 of Claim 2 describes that "during the ink(20) printing step on a base film(10), either pearls or glitters are applied to the base film(10) by printing." On the other hand, the description in the specification states, "In the step of applying ink to the above base film by a printing method, it has the characteristics of replacing the ink with pearls or glitters ··· (omitted) ... Also, in the step of applying ink as a printing method to the above base film, the ink(20) may be replaced by pearls or glitters. (omitted)...in the state of which either pearls or glitters are applied instead of ink"(Refer to Paragraph No.

[0014], [0020], and [0022]).

The plaintiff purports that “Element 1-1 of Claim 2 is literally interpreted as mixing and applying of pearl/glitter to the ink, whereas the description of the invention only states substituting ink with pearls or glitters. Since the step of applying ink mixed with pearls or glitters is not described in the description of the invention, the invention under Claim 2 is not supported by the description of the invention.”

However, it is a common knowledge in the technical field that pearls or glitters are made of mineral powder and plastic pieces, and it is difficult to apply them alone by printing, and mixing them with a liquid is essential. Therefore, it is a matter of ordinary skill in the art to mix and apply pearls or glitters with ink in the liquid form. As such, mixing pearls or glitters with ink can be seen to be substantially the same as replacing some of the ink with pearls or glitters. So a skilled person would have understood the phrase “applying pearls or glitters instead (substitution) of ink” as “only a part of the ink is replaced by pearls or glitters,” that is, “applying a mixture of ink and pearls or ink and glitters” as described in the claim interpretation.

Therefore, the plaintiff's claim cannot be accepted since the invention under Claim 2 is supported by the description of the invention.

3) Summary of Analysis

Then, there are no grounds for invalidation for lack of written description as required under Article 42(4)(i) of the Patent Act.

D. Whether IPTAB Erred

Since the inventive step under Claim 2 is not denied by Prior Arts 1 and 2, and there is no deficiency in the written description, the IPTAB decision is consistent with the above analysis and shall be upheld.

3. Conclusion

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

Presiding Judge Jejeong LEE
Judge Sanghoon NA
Judge Jiyoung LEE

PATENT COURT OF KOREA
TWENTY-SECOND DIVISION
DECISION

Case No.: 2017Na22 Injunction against Construction and Damages

Plaintiff-Appellant: A

Defendants-Appellees: 1. Hyundai Motor Co., Ltd.
2. Hyundai Engineering Co., Ltd.
3. Daor E&C Co., Ltd. (previously VSL Korea Co., Ltd.)

District Court's Decision: Seoul Central District Court Decision, 2012GaHap60898, dated September 9, 2016

Date of Final Trial: May 31, 2018

Decision Date: July 12, 2018

ORDER

1. The plaintiff's appeal and the demand that is added in this court shall be dismissed.

2. The cost that has arisen after the filing of the appeal shall be borne by the plaintiff.

PLAINTIFF-APPELLANT'S DEMAND

The lower court's decision shall be revoked. The defendants shall

not raise, extend, reconstruct or structurally modify plants and other buildings with the plaintiff's technology specified in Appendix. Also, the defendants shall not disclose, leak, use, transfer, assign, lease, or bid or exhibit for the purpose of assignment or leasing the plaintiff's technology specified in Appendix. The defendants shall jointly provide the plaintiff with KRW 484,900,000 and interest thereon at an annual rate of 15% for a period from the day after the date on which a duplicate of the Complaint at Issue is served to the date on which the said amount is paid in full (the plaintiff amended the Plaintiff's Demand as specified above).

OPINION

1. Scope of Adjudication of This Court

At the lower court, the plaintiff claimed the followings against the defendants: (i) injunction against copyright infringement and damages therefrom; (ii) injunction against patent infringement and damages therefrom; (iii) injunction against trade secrets misappropriation under Article 2(2) of the Unfair Competition Prevention and Trade Secret Protection Act (hereinafter the “Unfair Competition Prevention Act”) and damages therefrom; and (iv) damages for unfair breaking-off of agreement negotiation. However, the lower court dismissed claims (i) through (iv). It is clear from the record that, in this regard, the plaintiff filed an appeal only against Claim (iii) and added in this court (v) injunction against the act of unfair competition that falls under Article 2(1)(j) of the Unfair Competition Prevention Act and damages therefrom, or alternatively, damages from torts under Article 750 of the Civil Act. Thus, since only the claims (iii) and (v) stated above are subject to the adjudication of this court, this court will determine only (iii) and (v).

2. Background (History of Construction at Issue)

A. The defendant Hyundai Motor Co., Ltd. (hereinafter the "defendant Hyundai Motor") determined to raise, extend, reconstruct and structurally modify the Design Plant (#41) of Hyundai Motor at 523-7, Yangjung-dong, Buk-gu, Ulsan Metropolitan City (hereinafter the "Construction at Issue") and inquired the plaintiff if it is possible to perform the Construction at Issue from around April 2012. The plaintiff replied that it is and then began preparing for the performance of the Construction at Issue.

B. In the meantime, in June 2012, the defendant Hyundai Motor also inquired the defendant Daor E&C Co., Ltd. (VLS Korea Co., Ltd. at the time, but changed its name to Daor E&C Co., Ltd on December 26, 2016. Hereinafter the "defendant Daor E&C") if it is possible to perform the Construction at Issue and then began negotiating with the defendant Daor E&C Co., Ltd. as well.

C. Since then, the defendant Hyundai Engineering Co., Ltd. that is an affiliated company of the defendant Hyundai Motor and a party to the agreement for the Construction at Issue (Hyundai Amco Co., Ltd. at the time, but was merged into Hyundai Engineering Co., Ltd. on April 8, 2014. Hereinafter the "defendant Hyundai Engineering") finally awarded the Construction at Issue to the defendant Daor E&C through the bidding process under its internal rules. The defendant Daor E&C completed the Construction at Issue around August 31, 2012.

[Factual Basis] Undisputed facts, statements in Plaintiff's Exhibits 3, 8 through 10, 16, 24, 86 through 89 (including hyphenated number, if any), and the purport of the overall argument

3. Injunction on Trade Secrets Misappropriation and Act of Unfair Competition

A. Summary of Cause of Action

The plaintiff seeks injunction against the defendants, as specified in the Plaintiff's Demand, by arguing to the effect that "the plaintiff's technology specified in the Appendix is the trade secrets under Article 2(2) of the Unfair Competition Prevention Act or the outcomes achieved through substantial investment or efforts under Article 2(1)(j). The defendants may infringe the business interests of the plaintiff by using, without consent of the plaintiff, the plaintiff's technology specified in the Appendix or providing the same to a third party."

B. Discussion

The Unfair Competition Prevention Act prescribes that a person who possesses trade secrets, may file a request, with the court, for prohibition or prevention of misappropriation against any person who misappropriates or is likely to misappropriate trade secrets, if business interests of the person who possesses the trade secrets is damaged or is likely to be damaged by such acts (Article 10(1)). The Unfair Competition Prevention Act also prescribes that a person whose business interest is injured or threatened by an act of unfair competition may file a request, with the court, for prohibition or prevention against any person who conducts or intends to conduct an act of unfair competition.

In order for the injunction as the above to be granted, an act of trade secret misappropriation or an act of unfair competition shall, in principle, be in continuation as of the date of final trial for the request for prohibition to be admitted. Also, even if an act of trade secret misappropriation or an act of unfair competition is suspended

temporarily, the injunction may be admitted as a preliminary injunction where it is highly likely for the said act to be repeated. Otherwise, the injunction would not be granted.

In this case, even if the plaintiff's technology specified in the Appendix is the trade secrets or the outcomes and the defendants committed an act of trade secret misappropriation or an act of unfair competition by using the trade secrets or the outcomes in the Construction at Issue as the plaintiff argues, it seems unlikely that the alleged act of trade secret misappropriation or the alleged act of unfair competition would be repeated in light of the following facts.

① As explained above, the Construction at Issue was completed on or around August 31, 2012. As of May 31, 2018 which was the date of final trial, about 6 years have passed since the Construction at Issue was completed.

② Furthermore, the technology used in the Construction at Issue was a technology modified according to the unique characteristics of the Construction at Issue and is unlikely to be repeated in other constructions (even the plaintiff argues to the effect that “the technology used in the Construction at Issue is different from the plaintiff's patented invention and is modified in light of the unique characteristics of site and conditions of the Construction at Issue”).

③ Moreover, on June 15, 2016, the plaintiff disclosed the details of the technology used in the Construction at Issue, such as the plaintiff's technology specified in the Appendix, in its blog in Naver (Defendant's Exhibit 12). Thus, the plaintiff's technology specified in the Appendix shall not be protected as trade secrets as of the date of final trial. Furthermore, it would not be an act of unfair competition that violates the fair commercial practices or fair competition order for a third party to use the technology that the plaintiff itself disclosed.

C. Sub-conclusion

Thus, the injunction request against an act of trade secret misappropriation or an act of unfair competition by the plaintiff against the defendants is without merit and dismissed without further discussion.

4. Damages

A. Summary of Cause of Action

The plaintiff seeks against the defendants the amount specified in the Plaintiff's Demand as the damages under Article 11 or 5 of the Unfair Competition Prevention Act or Article 750 of the Civil Act by arguing to the effect that “the defendant Hyundai Motor and the defendant Hyundai Engineering became to know the plaintiff's technology specified in the Appendix in the course of negotiation with the plaintiff for the Construction at Issue and disclosed the said technology to the defendant Daor E&C. The defendant Daor E&C performed the Construction at Issue with the plaintiff's technology specified in the Appendix. Such acts of the defendants infringed on trade secrets under Article 2(2) of the Unfair Competition Prevention Act or fell under an act of unfair competition under Article 2(1)(j) of the same Act or torts under Article 750 of the Civil Act.”

B. Damages for Act of Trade Secret Misappropriation

1) Legal Principle

The term “trade secrets” under Article 2(2) of the Unfair Competition Prevention Act means information, including a production method,

sales method, useful technical or business information for business activities, that is not publicly known, being the subject of reasonable efforts to maintain its secrecy, and has independent economic value. Here the phrase "not publicly known" means that the information is not known to the general public by appearing in media, such as publication, etc. and may be obtained only from its holder. Information would not deemed as trade secrets notwithstanding the fact that its holder controls the same as confidential, when the same is already known to the public (See, e.g., Supreme Court Decision 2002Da60610 dated September 23, 2004). The phrase "the subject of reasonable efforts to maintain its secrecy" means that it is marked or notified that information is secret and the fact that the information is maintained or controlled as secret can be recognized objectively by limiting persons who can access the information or methods with which the information can be accessed or binding to persons who access the information with the duty of confidentiality, etc. (See, e.g., Supreme Court Decision 2008Do3435, dated July 10, 2008).

2) Whether Technical Information Is Trade Secrets

The plaintiff specifies, as trade secrets, its technology specified in the Appendix (The technology is classified into 9 items. Hereinafter, the items shall be referred to as the "Technical Information 1," etc., depending on their classification number). Thus, they shall, as shown below, be divided into 3 parts depending on the type of each technical information and examined whether they are trade secrets.

a) Patent-related technical information (Technical Information 1 - 5)

The plaintiff argues that the Technical Information 1 - 5 falls under the trade secrets prescribed by Article 2(2) of the Unfair Competition Prevention Act.

However, the Technical Information 1 - 5 are not trade secrets that

meet the not-generally-known requirement and secrecy requirement, etc. Thus, this argument cannot be accepted.

① First, we will examine whether the Technical Information 1 - 5 meets the not-generally-known requirement of trade secrets, that is to say, whether the Technical Information 1 - 5 was not publicly known at the time of the Construction at Issue.

According to the statements in Plaintiff's Exhibit 1 (including hyphenated number), the following facts may be admitted: on February 19, 2002, the plaintiff filed a patent application for an invention of the "method for raising and extending a steel-frame building and device therefor"; on October 21, 2004, the plaintiff completed the patent registration therefor (Patent No. 454986); and on August 25, 2003, the relevant patent specification was disclosed.

Meanwhile, a patent application must be accompanied by a specification of the invention, necessary drawings and abstract, and the detailed description of the invention must specify the purpose, composition, and effect of the invention so that a person having ordinary skill in the art (a "skilled person") can easily work the invention. The claims must specify the matters indispensable to the composition in a clear and concise manner so that a skilled person in the art would be able to practice the invention based on the disclosure. Thus, a person who argues trade secret relating to an invention for which a patent application is filed must argue and prove, upon concrete identification, what information other than those in the patent application is controlled as trade secrets and what kinds of economic values are vested therein (See Supreme Court Decision, 2002Da60610, dated September 23, 2004).

In this regard, the plaintiff argues to the effect that "the Technical Information 1 - 5 modifies the patented invention so that it can be suitable for the Construction at Issue in light of unique characteristics of the Construction Site at Issue.[1] As can be verified in the Appendix,

1) The final column height of the Construction at Issue is 1.6m. The types

the following technical information are included in addition to the patent application: the rise height of hydraulic cylinder is set to 1,800mm (Technical Information 1); a steer tower support (1.2m of length and width, 5m of height) is installed and the hydraulic cylinder is installed at the upper part of the steer tower support (Technical Information 2); the hydraulic cylinder is installed at both sides of column (Technical Information 3); the deviation of rise height of each column shall be controlled not to exceed 4mm (Technical Information 4); and the upward construction method shall depend on the shape of column, etc. (Technical Information 5). Thus, they are not the same as the patented invention of the plaintiff."

According to the said argument of the plaintiff, the Technical Information 1 - 5 other than the modification as stated above is disclosed in the said patented invention and is thus already publicly known prior to the Construction at Issue and is not trade secrets.

Moreover, the following parts of the Technical Information 1 - 5, which the plaintiff argues to be the modification to the patented invention and different from the patented invention can be determined naturally depending on the conditions of the construction site and can be easily drawn by a skilled person through reverse engineering etc. with technology publicly known by the patent specification of the plaintiff: to set the rise height of hydraulic cylinder to 1,800mm (Technical Information 1); to install a steer tower support (1.2m of length and width, 5m of height) and to the hydraulic cylinder at the upper part of the steer tower support (Technical Information 2); to install the hydraulic cylinder at both sides of the column (Technical Information 3); to control the deviation of rise height of each column not to exceed 4mm (Technical Information 4); and to apply different

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of columns at the Construction Site at Issue are pipe column, H beam column, concrete column and column whose lower part is made of concrete and whose upper part is made of pipe or H beam. A truss is installed at one side or both sides of column at the roof (Plaintiff's Exhibits 3 and 6).

upward construction methods depending on the shape of the column, etc. (Technical Information 5)

Furthermore, if the Technical Information 1 - 5 is a modification, as the plaintiff argues, for the Construction at Issue in light of its unique characteristics, it is difficult to deem that the Technical Information 1 - 5 had been completed and existed before the plaintiff received from the defendant Hyundai Motor the matters regarding environment or conditions of the Construction Site at Issue. Thus, we do not believe that the plaintiff has controlled the said technical information as trade secrets prior to the Construction at Issue.

② Next, we examine whether the Technical Information 1 - 5 meets the secrecy requirement of trade secrets, that is to say whether the Technical Information 1 - 5 has been the subject of reasonable efforts to maintain its secrecy.

According to statements in Plaintiff's Exhibits 2, 25, 36 and 47 (including hyphenated numbers, if any), it can be admitted that the plaintiff imposed confidentiality obligations by making the other party to the transaction or negotiation to sign a non-disclosure agreement on the technical information or informing the other party of the potential legal liabilities in case of a leakage of its technical information, etc. However, since it is impossible to know whether the technical information that is the subject of the duty of confidentiality falls under the Technical Information 1 - 5 and it is hard to say that the plaintiff imposes the duty of confidentiality whenever it transacts or negotiates, etc., the established facts are insufficient to yield a conclusion that the Technical Information 1 - 5 was the subject of reasonable efforts to maintain its secrecy and meets the secrecy requirement.

In this regard, the plaintiff argues that it agreed with OOO who was an employee of the defendant Hyundai Motor to apply the non-disclosure agreement in Plaintiff's Exhibit 2 to the Construction at Issue. However, there is no evidence to admit the said argument.

Furthermore, according to the statements in Plaintiff's Exhibit 6, it may be admitted that the minutes dated April 29, 2010 of the

defendant Hyundai Motor specifies the Technical Information 1 ~ 3 and 5 and its distributor as "Facility Support Team of Gwanggaegisan Co., Ltd." However, it is insufficient to deem that, only from the said established facts, the said technical information has been the subject of reasonable efforts to maintain its secrecy and satisfies the secrecy requirement of trade secrets, in light of the following facts: the said minutes neither contains any mark that indicates the said technical information may be secrets, nor does it obligates the readers to keep the duty of confidentiality; and while the identification of the distributor somewhat restricted those who have access to the technical information, it seems that any employee in the facility support team of the defendant Hyundai Motor, as the recipient of the minutes, could access the said technical information without difficulty and not bound by any duty of confidentiality for the plaintiff.

In this regard, the plaintiff argues that it informed, in the meeting with the defendant Hyundai Motor and the defendant Hyundai Engineering Co., Ltd, that the said technical information is confidential. However, there is no evidence to admit the said argument.

③ As examined above, the Technical Information 1 - 5 was publicly known even prior to the Construction at Issue and thus fails to meet the not-generally-known requirement. Also, there is no evidence to prove that the said technical information has been the subject of reasonable efforts by the plaintiff to maintain its secrecy and thus the said information fails to satisfy the secrecy requirement. Thus, the Technical Information 1 - 5 are not trade secrets stipulated by Article 2(2) of the Unfair Competition Prevention Act.

b) Technical information related to the prevention of dent in a pipe at the lower part of truss (Technical Information 6)

The plaintiff argues that the Technical Information 6 related to the prevention of dent in a pipe at the lower part of truss is a trade secret.

However, Technical Information 6 is the technology that was widely known to those in the field even prior to the Construction at Issue in

light of the following facts: (i) as can be known from statements in Defendant's Exhibits 18A through 26, the technology for "pipe support," which is similar to the Technical Information 6 has been published in a number of media, such as publication, etc., even prior to the Construction at Issue; (ii) it was widely known and common technology in the field even prior to the Construction at Issue to form the pipe support as a semicircular steel pipe which is adjusted to an external diameter of the lower part of cylindrical pipes and to add steel plates or use a thick steel plate for prevention of dent in pipes caused by loads; and (iii) contrary to the plaintiff's argument, it is difficult to find technical uniqueness in the specification, material, etc. of the means to prevent a dent in pipes at the lower part of truss.

Furthermore, according to statements in Plaintiff's Exhibit 12, even the design drawing that the defendant Daor E&C prepared on May 15, 2012 illustrates a "thick semicircular plate" as a truss pipe support (even if the material of support is not specified, a person in the field can easily guess that the material would be steel). This also supports the fact, as examined above, that the Technical Information 6 has been widely used in the industry even prior to the Construction at Issue.

In relation, the plaintiff argues to the effect that "on or around May 8, 2012 which was before the said design drawing (Plaintiff's Exhibit 12) was prepared, the plaintiff personally prepared by hand the drawing for the prevention of dent in a pipe at the lower part of truss (Plaintiff' Exhibit 23) and then sent the drawing by fax to the defendant Hyundai Motor. The defendant Hyundai Motor delivered the said drawing to the defendant Daor E&C. The defendant Daor E&C only came to use the said trust pipe support thereupon."

However, Plaintiff's Exhibit 23 that the plaintiff submitted as a ground for the above argument only illustrates the prevention of dent in a pipe at the lower part of truss. It does not show whether the plaintiff sent the said drawing to the defendant Hyundai Motor (the defendant Hyundai Motor denies its receipt), whether the drawing was sent on May 8, 2012, or whether the defendant Hyundai Motor

delivered the said drawing to the defendant Daor E&C, etc., and no other supporting evidence is present. Even if the drawing in Plaintiff's Exhibit 23 was sent to the defendant Hyundai Motor on or around May 8, 2012 and then delivered to the defendant Daor E&C, as the plaintiff argues, it does not follow that the design drawing in Plaintiff's Exhibit 12 was prepared in reference to the drawing in Plaintiff's Exhibit 23.

Therefore, it would be reasonable to deem that the Technical Information 6 was already widely known prior to the Construction at Issue. Moreover, there is no evidence to admit that the plaintiff put reasonable efforts to maintain and control the secrecy of the Technical Information 6. Thus, the Technical Information 6 is not trade secret prescribed by Article 2(2) of the Unfair Competition Prevention Act.

c) Technical information related to the conditions for the Construction at Issue (Technical Information 7 - 9)

The Technical Information 7 relates to the “Precondition, such as Weather, etc. for the Construction.” The Technical Information 8 relates to the “Construction Expenses.” And the Technical Information 9 relates to the “sharing of responsibilities among the plaintiff, the defendant Hyundai Motor and the defendant Hyundai Engineering.”

However, the information in the Technical Information 7 - 9 is mere practices, common knowledges or administrative matters that are already widely known in the industry, rather than technical information, not to mention it is customized to reflect the uniqueness of the Construction at Issue. Further, it is difficult to deem that the plaintiff has maintained the Technical Information 7 - 9 as trade secrets prior to the Construction at Issue.

Moreover, the Technical Information 7 - 9 was specified, as it is, in the minutes of the defendant Hyundai Motor dated April 29, 2010 (Plaintiff's Exhibit 6). Thus, as examined above, the plaintiff has not maintained the Technical Information 7 - 9 as trade secrets.

Thus, the Technical Information 7 - 9 are not trade secrets prescribed by Article 2(2) of the Unfair Competition Prevention Act.

3) Sub-conclusion

Thus, the claim for damages by the plaintiff against the defendants premised upon the argument that the plaintiff's technology specified in the Appendix (Technical Information 1 - 9) are trade secrets under Article 2(2) of the Unfair Competition Prevention Act fails without further discussion.

C. Damages for "Act of Unfair Competition (or Torts)"

1) As to an argument for an act of unfair competition specified by Article 2(1)(j) of the Unfair Competition Prevention Act, Item (j) was newly adopted on July 30, 2013. The Unfair Competition Prevention Act was amended by Act No. 11963 and was enforced from 6 months after promulgation under its supplementary provisions. As examined above, the Construction at Issue was completed on August 31, 2012 prior to the enforcement date. Thus, Article 2(1)(j) of the said amended Unfair Competition Prevention Act does not apply to the alleged act of unfair competition related to the Construction at Issue.

   Thus, the claim for damages by the plaintiff against the defendants premised upon the argument that the defendants' acts fall under the act of unfair competition specified by Article 2(1)(j) of the Unfair Competition Prevention Act fails without further discussion.

2) Furthermore, as to an argument for torts specified by Article 750 of the Civil Act, an act that makes unfair profits and

infringes the competitor's interest that deserves legal protection by using the outcomes of the competitor without permission and taking advantage of the efforts and investments of the competitor is an unjust competition act against the commercial practice and fair competition order and thus may constitute torts under the Civil Act (See, e.g., Supreme Court Decision 2008Ma1541 dated August 25, 2010).

However, as examined above, the Technical Information 1 - 6 was already publicly known prior to the Construction at Issue or easily derivable by those in the field. The Technical Information 7 ~ 9 was just preconditions to construction, construction expenses and construction specification that are customarily considered at a construction site. Then, the plaintiff's Technical Information 7 - 9 does not appear to be the achievement for which the plaintiff has put substantial efforts and investments, and using technologies in the public domain does not constitute an act of unfair competition against the commercial practice or fair competition order.

Furthermore, the plaintiff's technology specified in the Appendix, as examined above, was modification customized to reflect the uniqueness of the Construction Site at Issue through a number of meetings among the plaintiff, the defendant Hyundai Motor and the defendant Hyundai Engineering. Thus, the said modification was no more than simple ideas presented in the discussion process and was not an achievement that the plaintiff retained prior to the Construction at Issue or an exclusive achievement by the plaintiff.

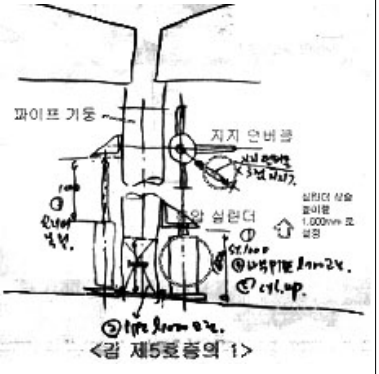
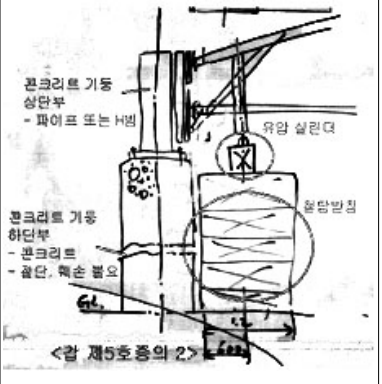
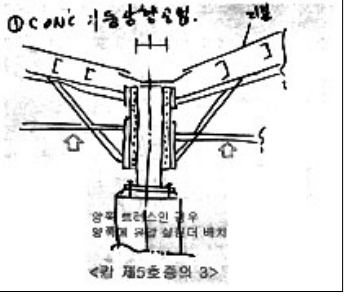
Thus, the claim for damages by the plaintiff against the defendants premised upon the argument that the defendants' acts constitute torts under Article 750 of the Civil Act fails without further discussion.

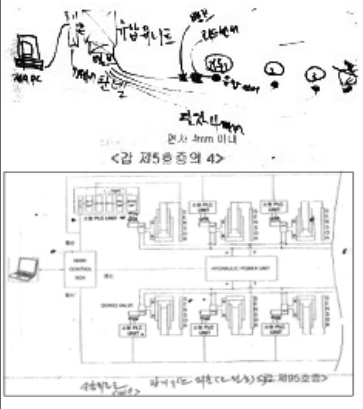
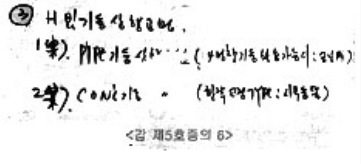
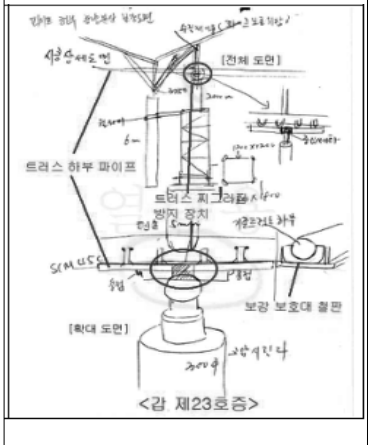
5. Conclusion

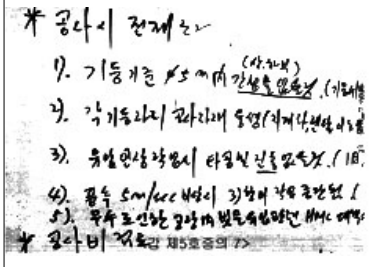
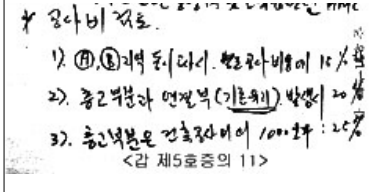
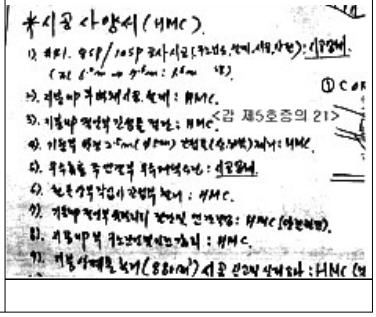
Then, the lower court's decision that dismissed the plaintiff's claims for injunction and damages against trade secret misappropriation under Article 2(2) of the Unfair Competition Prevention Act is well-grounded, and the plaintiff's appeal is without merit and therefore dismissed. The claim for injunction and damages against an act of unfair competition under Article 2(1)(j) of the Unfair Competition Prevention Act and the claim for damages therefrom or the claim for tort damages under Article 750 of the Civil Act, added alternatively in this court, are also without merit and therefore dismissed as ordered.

Presiding Judge Jejeong LEE
Judge Sanghoon NA
Judge Jiyoung YI

[Appendix] Plaintiff's Technology

Classification	Technology Information	Relevant drawings and description
1	This relates to an installation location of hydraulic cylinder for the rising of a "pipe column." This is to fix (with screw bolts) the hydraulic cylinder to a lower part of column by installing the hydraulic cylinder at a floor, to shorten a construction period and reduce construction expenses by raising at one go by setting a cylinder rising height to 1,800mm in light of the fact that a rising height is 1,600mm, and to install a tripodal turnbuckle at the top for the prevention of cylinder wobbling at the time of raising.	 <감 제5호증의 1>
2	This relates to an installation location of hydraulic cylinder for the rising of roof in "structure where only one truss in a concrete column (concrete in its lower part and pipe or H beam in its upper part) is over the column." This is to separate the concrete in its lower part without cutting (in particular, it is required not to damage the concrete roof of wall in an office building) from the pipe or H beam in its upper part and to install the hydraulic cylinder over a steel tower support with height of about 5m and length and width of about 1.2m for fixing the hydraulic cylinder to the pipe or H beam in its upper part.	 <감 제5호증의 2>
3	This relates to an installation location of hydraulic cylinder for the rising of roof in "structure where both trusses in a concrete column (concrete in its lower part and pipe or H beam in its upper part) are over the column." This is to install hydraulic cylinders at both sides of column for prevention of dent in a truss, etc.	 <감 제5호증의 3>

Classification	Technology Information	Relevant drawings and description
4	The Construction Site at Issue required safe construction through computer control in light of the fact that the construction shall be performed simultaneously in two distinct areas (A and B), that there are 3 different types of columns, and that office building walls should not be separated or damaged. The technology relates to the computer system that controls each hydraulic cylinder so that the deviation of rising heights of each column shall not exceed 4mm.	 <감 제5호증의 4>
5	3 types of columns, such as steel (H beam) columns, pipe columns, and concrete columns are used at the Construction Site at Issue. This explains that different construction methods should be applied to each different type of column. In particular, it relates to which type of construction method should be used for steel (H beam) columns, depending on whether hydraulic cylinders can be installed in columns in all directions (in plant) or only in one direction (columns next to an office building).	 <감 제5호증의 6>
6	In the process of the upper part of the cylinder supporting the pipes at the lower part of truss, the pipes (6mm in thickness) may incur dents. This relates to the device that prevents dents in truss by expanding parts to which loads are applied by adding long semicircular steel plates under pipes at the lower part of truss, adding rectangular steel plates (reinforcement steel plate with SCM 45C materials), fixing the semicircular steel plates to the center of the reinforcement steel plates and preventing loads from applying to one part by bending the reinforcement steel plates a bit in advance.	 <감 제23호증>

Classif ication	Technology Information	Relevant drawings and description
7	As the preconditions for construction in light of the construction time (from the end of July to the beginning of August) and period, all interferences within the radius of 5m from each column must be removed; construction must be suspended when wind speed exceeds 5m/s; solution is needed when rainwater flows into an empty space between the roofs that are raised and the roofs that are not (fixing water-repellent cloth to a skirt of 1.6m or over with pieces), etc.	
8	This relates to the estimate scope of construction expenses depending on the construction methods. The degree of increased difficulty compared to the existing construction method where the construction is performed simultaneously in area A and area B or where only parts of building are raised, etc.	
9	This relates to the responsibility sharing as to the Construction at Issue among the plaintiff, the defendant 1, and the defendant 2. The plaintiff will be in charge of the construction (structural review, design, construction, safety) and measures for rainwater. This shows the roles that the plaintiff assume and the technology of which the plaintiff is in charge.	

PATENT COURT OF KOREA
SECOND DIVISION
DECISION

Case No.: 2018Heo1783 Rejection (Trademark)

Plaintiff: Venus Laboratories, Inc.
United States of America

Defendant: Commissioner of the Korean Intellectual Property Office

Date of Final Trial: May 17, 2018

Decision Date: May 31, 2018

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 2016Won4682 dated January 4, 2018 shall be revoked.

OPINION

1. Background

A. Mark at Issue

1) Filing Date of Application/ Application No.: August 6, 2015/ No. 40-2015-58774

2) Mark: EARTH FRIENDLY PRODUCTS

3) Designated Goods: As listed in the Annex

B. Procedural History

1) As to the plaintiff's Marks at Issue (hereinafter the "Subject Mark"), on January 4, 2016, a Korean Intellectual Property Office ("KIPO") examiner notified the grounds for rejection stating that "the Subject Mark may not be registered on the grounds not only that it falls under Article 7(1)(vii) of the Trademark Act (the Trademark Act before being wholly amended by Act No. 14033 on February 29, 2016. Hereinafter the "old Trademark Act"), because the mark and designated goods of the Subject Mark are identical or similar with those of EARTH FRIEND of prior-registered mark No. 800933 and 

of prior-registered international mark No. 1025368, but also that it falls under Article 10(1) of the old Trademark Act, because the names of some of the designated goods are inappropriate."

2) On April 1, 2016, the plaintiff submitted a written argument and the amendment for the grounds for rejection stated above. However, on May 16, 2016, the examiner rejected the Subject Mark on the grounds that "the written argument and the amendment of the plaintiff failed to resolve the matters regarding Article 7(1)(vii) of the old Trademark Act."

3) Hence, on August 9, 2016, the plaintiff filed an administrative action in IPTAB against the above rejection. On September 7, 2017, in IPTAB Case No. 2016Won4682, IPTAB notified new grounds for rejection stating that "the Subject Mark may not be registered under Article 6(1)(iii) and 6(1)(vii) of the old Trademark Act, because the Subject Mark EARTH FRIENDLY PRODUCTS not only expresses the nature (raw materials, quality, effect, etc.) of the designated goods as it is accepted to mean 'earth- (eco-) friendly goods, etc.' but also has no distinctiveness as a mark in its entirety."

4) On January 4, 2018, IPTAB rendered its decision to dismiss the plaintiff's petition for administrative trial on the grounds that "the Subject Mark is not only a 'descriptive mark' prescribed by Article 6(1)(iii) of the old Trademark Act but also under the 'trademark which is unrecognizable for consumers to identify which goods related to whose business it indicates' prescribed by Article 6(1)(vii) of the old Trademark Act.

5) On the other hand, on August 5, 2016, which was prior to the petition for administrative trial against the said rejection, the plaintiff petitioned (2016Dang2361 and 2016Dang2364) IPTAB, under Article 73(1)(iii) of the old Trademark Act, to revoke the registration of prior-registered mark and internationally-registered mark ("toys for domestic pets" among the designated

goods) that had been pointed out as the grounds for rejection under Article 7(1)(vii) of the old Trademark Act. The administrative decisions upholding each petition became final and conclusive on April 22, 2017 and April 18, 2017, respectively.

[Factual basis] Undisputed facts, statements in Plaintiff's Exhibits 1 through 5 (including hyphenated number, if any), and the purport of the overall argument

2. Whether IPTAB Erred

A. Summary of Plaintiff's Arguments (grounds for revocation of IPTAB decision)

The IPTAB erred in its decision on the grounds stated below and should be revoked.

1) The IPTAB erred procedurally by citing a new ground for rejection during trial.

- Where a decision is rendered on a new ground for rejection in an administrative trial against rejection, the new ground for rejection should be cited only to supplement the existing grounds for rejection. However, as the IPTAB notified a new ground for rejection, i.e. lack of distinctiveness, the IPTAB deprived the plaintiff of the opportunity to be examined twice, in an examination and then in an administrative trial, and nullified the plaintiff's efforts to overcome the grounds for rejection by filing an action to revoke the prior-registered marks related to the first Office action. Also, the IPTAB deprived the plaintiff of an opportunity to overcome the new ground for rejection by deleting

and amending some of the goods related to the new ground for rejection, i.e. lack of distinctiveness. Thus, the IPTAB erred procedurally in its decision.

2) The Subject Mark does not fall under Article 6(1)(iii) and 6(1)(vii) of the old Trademark Act and the IPTAB decision ruling otherwise is erroneous.

- EARTH FRIENDLY PRODUCTS, the Subject Mark, is to be construed to mean a "product friendly with the earth" or a "product kind to the earth." However, the IPTAB construed the Subject Mark to mean a "earth- (eco-) friendly product", which is not natural and grammatically incorrect. Even if the IPTAB correctly construed the meaning, the Subject Mark only suggests the nature, such as quality, effect, etc. of the designated goods, and does not go as far as to be instinctively distinctive. Thus, the Subject Mark does not fall under Article 6(1)(iii) of the old Trademark Act.
- The Subject Mark is not a mark that has been widely and commonly used. Rather, as the plaintiff has used the Subject Mark over the past 50 years, the Subject Mark is well known as a source indicator of the plaintiff to ordinary consumers. Thus, the Subject Mark does not fall under Article 6(1)(vii) of the old Trademark Act.

B. Procedural Error

The plaintiff argues that "where a decision is rendered based on a new ground for rejection in an administrative trial against rejection, the new ground for rejection should be cited only to supplement the existing grounds for rejection. On the contrary, the IPTAB notified a

new ground for rejection, i.e. lack of distinctiveness, and rendered its decision based on the new ground for rejection. Thus, the IPTAB erred procedurally in its decision."

However, Article 23(2) of the old Trademark Act prescribes that "where an examiner intends to reject a trademark registration, he or she shall notify the applicant of the grounds for rejection. In such cases, the applicant may submit a written opinion about the grounds for rejection within a period prescribed by Ordinance of the Ministry of Trade, Industry and Energy." And Article 23(4) of the same Act prescribes that "an applicant who fails to submit a written opinion within a period under the latter part of paragraph (2) may apply for continued proceeding and submit a written opinion addressing the grounds for rejection within two months from the expiration date of such period." Also, Article 81(1) and (3) of the same Act prescribe that Article 23(2) and (4) shall also apply mutatis mutandis where a ground for rejection is found in an administrative trial against a rejection and it is different from the ground cited in the underlying rejection.

These provisions are the so-called mandatory provision set forth in consideration of the public interest in the propriety of administrative trials and the credibility of the trial system. Thus, if a decision is rendered based on a new ground for rejection other than the existing grounds for rejection in an administrative trial against rejection and an opportunity to submit a written opinion is not awarded to the applicant, the decision is against the law. It would be sufficient, however, if the main purport of the ground for rejection coincides with the reason described in the Office action. Unless a new ground for rejection other than the existing grounds for rejection is found in an administrative trial against rejection, it is not required to notify the new ground for rejection (See e.g., Supreme Court Decision 98Hu3000 dated November 12, 1999).

Under the provisions and legal principles stated above, the plaintiff's argument that where a decision is rendered based on a new ground for

rejection in the administrative trial against rejection, the new ground should be cited only to supplement the existing grounds would be meaningful as an argument for procedural error only where the new ground for rejection is not duly notified. In other words, a new ground for rejection is permitted in principle in an administrative trial against rejection, unlike the plaintiff's argument, as long as a notice is given to the applicant to award an opportunity to submit a written opinion.

However, as explained above, the IPTAB rendered its decision after it notified the new ground for rejection to the applicant, the plaintiff in this case, and thus giving an opportunity to submit the written opinion against the new ground for rejection. Thus, there is no procedural error in the IPTAB decision as argued by the plaintiff.

Thus, the plaintiff's arguments stated above may not be accepted.

C. Whether Subject Mark Falls under Article 6(1)(iii) and 6(1)(vii) of Old Trademark Act

1) Legal Principle

Article 6(1)(iii) of the old Trademark Act prescribes that a mark consisting solely of the place of production, quality, effect, usage, etc. in a common manner shall not be registered because such a descriptive mark as stated above is an indication usually required when the goods are distributed. Thus, anyone would need and want to use the descriptive mark, and the public interest dictates that the descriptive mark may not be exclusively used by a specific person. Also, if the descriptive mark stated above is allowed to be registered, it would be difficult to distinguish it from other's goods of the same kind. Thus, whether a mark falls under Article 6(1)(iii) of the old Trademark Act shall be determined objectively in light of the concept that the mark retains, relationship with the designated goods, course of trade, etc. (See e.g., Supreme Court Decision 2002Hu1140 dated August 16,

2004).

Article 6(1) of the old Trademark Act prescribes in subparagraph (vii), as one of circumstances in which a mark may not be registered, that "in addition to trademarks under subparagraphs (i) through (vi), a trademark which is unrecognizable for consumers to identify which goods related to whose business it indicates." This means that even a mark that does not fall under any of subparagraphs (i) through (vi) may not be registered if the mark cannot identify the source of its own goods from other goods. Whether a certain mark is without distinctiveness shall be determined in light of the concept that the mark carries, relationship with the designated goods, course of trade, etc. A mark lacks distinctiveness where it is difficult to acknowledge the distinctiveness of its own goods and other goods according to social norms or where it would not be appropriate for a specific person to monopolize the mark for public interests (See e.g., Supreme Court Decision 2012Hu2951 dated December 27, 2012).

2) Discussion

The Subject Mark, EARTH FRIENDLY PRODUCTS, is a letter mark in which three words, "EARTH", "FRIENDLY" and "PRODUCTS", are written in parallel.

"EARTH", "FRIENDLY" and "PRODUCTS" that comprise the Subject Mark are relatively easy words in view of the overall English level in Korea. The Subject Mark is a letter mark in which the words stated above are combined and it can be construed to mean an "earth (environment) friendly product," etc. overall. Thus, where the Subject Mark is used on the designated goods, such as "chemical preparations for melting snow and ice, laundry detergent, air deodorizers, paper towels, etc.," such goods shall be perceived directly as an "earth (environment) friendly product", an "eco-friendly product", etc. Thus, the Subject Mark would make the ordinary consumers form an instinctive view regarding quality, effect, etc. of the designated goods.

Furthermore, according to each statement and image of Defendant's Exhibits 6 and 10 through 13, the term “environment friendly product” is widely used in products, such as “detergent”, “shampoo”, “laundry detergent”, “plastic product,” etc., which are identical or similar to the designated goods of the Subject Mark as a term to represent the quality or effect of the goods. Then, the custom in the course of trade is that the “environment friendly product” that has the above construction or concept of the Subject Mark is widely used to represent the quality, effect, etc. of goods.

In light of the concept of the Subject Mark, relationship with the designated goods, course of trade, etc., it would be difficult to recognize its distinctiveness to differentiate its own goods from other goods under the social norm, as it is a descriptive mark that directly indicates quality, effect, etc. of the designated goods. Also, it would not be appropriate to have a specific person monopolize the Subject Mark, as it is a mark whose use shall be open to all persons who are engaged in the same trade. Thus, the Subject Mark falls under Article 6(1)(iii) and 6(1)(vii) of the old Trademark Act.

3) Discussion about Plaintiff's Argument

a) The plaintiff argues that “unless ‘EARTH’ and ‘FRIENDLY’ in ‘EARTH FRIENDLY PRODUCTS’ are combined with hyphen and used as a compound adjective, a meaning such as an ‘earth-friendly product’ cannot be derived. A very high level of knowledge in English is required to understand this grammar and thus it would not be deemed that ordinary consumers would easily perceive the meaning as such. Since ‘EARTH’ does not mean ‘environment,’ the Subject Mark cannot be construed to mean an ‘earth (environment) friendly product.’ Even if the Subject Mark is construed to mean an ‘earth (environment) friendly product,’ that is not natural construction directly imparted from constituent words but a secondary concept arising from deliberation on the words that is highly abstract, and it is hardly a

mark that directly represents the nature, such as quality, effect, etc., of the designated goods."

However, according to statements in Plaintiff's Exhibits 6-2, 5 and Defendant's Exhibit 4, "FRIENDLY" means "(commonly in a compound adjective) ··· friendly" (Naver English Dictionary), and "EARTH-FRIENDLY" and "EARTH FRIENDLY" mean "earth (environment) friendly" (Naver English Dictionary) and "friendly to earth, not harming environment" (Daum English Dictionary). In sum, while "FRIENDLY" is "commonly" used as a compound adjective when it is used to mean "··· friendly", the use as a compound adjective or the use of a hyphen is not required for it to be construed as "··· friendly." Moreover, both "EARTH-FRIENDLY" and "EARTH FRIENDLY" may be construed to mean "earth (environment) friendly" that includes the meaning of "environment."

Thus, it is grammatically correct and natural to construe that EARTH FRIENDLY PRODUCTS means an "earth (environment) friendly product" as a whole. Where the Subject Mark that is construed as an "earth (environment) friendly product" as explained above is used on the designated goods, such as "chemical preparations for melting snow and ice, laundry detergent, air deodorizers, paper towels, etc.," the goods are directly perceived to mean an "earth (environment) friendly product" or an "eco-friendly product." The Subject Mark would also make the ordinary consumers to instinctively form a view regarding quality, effect, etc. of the designated goods, as explained above. Thus, the plaintiff's argument as stated above may not be accepted.

b) The plaintiff argues to the effect that "since a lot of marks whose composition is similar to that of the Subject Mark are registered in Korea and the Subject Mark was already registered overseas, the distinctiveness of the Subject Mark shall be recognized and the Subject Mark shall be registered."

However, trademark registrability shall be determined individually in its relationship with the designated goods. The registration of other marks can not be the grounds to register a mark (See e.g., Supreme Court Decision 2005Hu353 dated May 12, 2006). The registrability of a mark shall be determined independently in relation to its designated goods under the Trademark Act in Korea and shall not be influenced by the registration in other countries whose legal system and languages are different from those of Korea (See e.g., Supreme Court Decision 2002Hu1768 dated May 16, 2003).

Thus, the plaintiff's argument stated above may not be accepted.

c) The plaintiff argues to the effect that “the plaintiff has used the Subject Mark on about 200 products for more than 50 years since it was founded in 1967 in the U.S. and its affiliate, whose name is identical to the Subject Mark, has been actively in charge of the business. The plaintiff has exported a substantial amount of its products to Korea since 2011. Accordingly, the Subject Mark secures a high level of awareness as a mark of the plaintiff. Thus, the Subject Mark does not fall under Article 6(1)(vii) of the old Trademark Act.”

However, Article 6(1)(vii) of the old Trademark Act is premised on the point that a mark has no or weak inherent distinctiveness. Thus, even if the awareness that the plaintiff argues is recognized, this only means that the Subject Mark may be registered upon acquired distinctiveness under Article 6(1)(vii) of the old Trademark Act. It does not mean that the inherent distinctiveness which was not found or existed only weakly in the Subject Mark would be suddenly recognized and survive Article 6(1)(vii) of the old Trademark Act.

Even if the plaintiff's argument above is favorably construed to concern acquired distinctiveness under Article 6(2) of the old Trademark Act, the statement and image in Plaintiff's Exhibits 12 through 15 are insufficient to conclude that domestic consumers can identify the Subject Mark as a source of goods as a result that the Subject Mark has been used with its designated goods for the

following reasons. First, the use of a mark in foreign countries does not directly influence its awareness in Korea. Second, Article 6(2) of the old Trademark Act is an exception to register a mark and award the absolute right where the mark acquired distinctiveness among general consumers or traders as a result of exclusive and continuous use for a substantial period of time by a specific person, even though the mark by itself would not have been registrable due to lacking or weak distinctiveness and monopoly of the mark by a specific person would not have been proper. To find such acquired distinctiveness, evidence must clearly demonstrate that the consumers and traders of the goods have come to perceive the mark as identifying a particular source in view of the following as a whole: the level of direct indication of quality, effect, etc. of goods by mark; the length, frequency, and consistency of use of the mark; the quantity of production and sales, and the market share of goods on which a mark is affixed; the method, frequency, content, period of and amount spent for advertisement and promotion; the quality of the goods; the reputation and credibility of mark user; and the degree and modality of competitive use, etc. (See e.g., Patent Court of Korea Decision 2016Heo2508 dated August 19, 2016). Without any other evidence showing otherwise, we do not believe that the Subject Mark acquired distinctiveness by use under Article 6(2) of the old Trademark Act.

Thus the plaintiff's argument stated above may not be accepted.

D. Whether IPTAB Erred

Then, since the Subject Mark falls under Article 6(1)(iii) and 6(1)(vii) of the old Trademark Act and it did not acquire the distinctiveness by use under Paragraph (2) of the same Act, it may not be registered. The IPTAB decision is consistent with the above analysis and no procedural error is found. Thus, the IPTAB decision shall be upheld.

3. Conclusion

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

Presiding	Judge	Jejeong LEE
	Judge	Sanghoon NA
	Judge	Jiyoung LEE

[Annex] The Designated Goods of the Subject Mark

- Class 1: Chemical preparations for melting snow and ice, chemical sprays used in the aid of housebreaking dogs and chemical composition in powder form for solidification of fluids and for absorbing spills, namely, for absorption of pet feces and urine

- Class 3: Laundry detergent, laundry detergent with fabric softener, laundry bleach, dishwashing detergent, fruit and vegetable wash, laundry starch, rinse aid for dishwashers, hand dish soap, disposable wipes impregnated with cleansing chemicals or compounds for household use, scented fabric refresher spray, window cleaning preparations, furniture polish, body lotion, skin cleansers, liquid hand soap, non-disinfectant toilet bowl cleanser and hard surface cleaning preparations, drain openers, toilet bowl cleaners, non-disinfectant multi-purpose bathroom cleaners, stainless steel cleaners, silver polish, tile cleaners, glass cleaners, chrome cleaners and septic and toilet holding tank cleaners, carpet shampoo, air freshener, namely, air fragrancing preparations, paint removers, upholstery cleaner, spray cleaner for use on whiteboards, pet shampoo and conditioner, pet stain and odor removers, non-medicated grooming preparations for pets, namely, shampoo and dander remover, disposable cleansing wipes impregnated with cleansing chemicals or compounds for household pets, non-disinfectant cage cleaner for pets, laundry detergent for pets, dry shampoo for pets, cleaning preparations for the surface of furniture and furniture, cleansers for household purposes, cleaners for leathers, cleaning preparations for dish, cleaning preparations for grills, cleaning preparations for metalworking machines and tools, metal cleaners, cleaning preparations for agricultural machines and implements, windshield cleaning

preparations, carpet cleaners with deodorizer, wallpaper cleaning preparations, toilet bowl detergents, brush cleaners, cleaning preparations for fabrics, cleansers for cleaning purposes, cleaning preparations, hand cleansers, upholstery cleaners, cleaners for litter trays, kitchen and bath cleaning preparations, automobile cleaners, cleaning preparations for babies' bottles, detergents other than for use in manufacturing operations and for medical purposes, cleaners for cosmetic brushes, liquid stain removers, deodorants for pets, combination liquid hand dishwashing detergent and automatic dishwashing detergent, cleaners for septic tanks, toilet holding tanks, drain lines and grease traps, bacterial and enzymatic cleaners for septic tanks, toilet holding tanks, drain lines and grease traps, body deodorizer (perfume), cleaner for litter boxes, deodorizer for animals

- Class 5: Air freshener, namely, air deodorizers, all-purpose disinfectants, herbicides for domestic use, disinfectant multi-purpose bathroom cleaners, antiseptic soaps for medical use on surfaces, medicated antiseptic lotions for personal use, odor-counteractants for janitorial, industrial and residential use, deodorants for use on fabrics, hard surfaces, and clothing, bacteriocidal composition for use on fabrics, hard surfaces, and clothing, disinfectants for tank or tankless type water closets, toilet bowls, urinals, bidets, and sanitary facilities sold in the form of a disposable dispenser, deodorants for tank or tankless type water closets, toilet bowls, urinals, bidets, and sanitary facilities sold in the form of a disposable dispenser, disinfectants contained in dispensers for urinals, deodorants contained in dispensers for urinals, disinfectant toilet bowl cleaners

- Class 16: Paper towels, bathroom tissue

PATENT COURT OF KOREA
FIFTH DIVISION
DECISION

Case No.: 2018Heo2458 Invalidation of Registration (Design)

Plaintiff: ENPRANI Co., Ltd.

Defendant: Bonne Co., Ltd.

Date of Final Trial: May 16, 2018

Decision date: June 22, 2018

ORDER

The IPTAB's decision on Case No. 2016Dang2726 ordered on January 29, 2018 shall be revoked.

The cost arising from this litigation shall be borne by the defendant.

PLAINTIFF'S DEMAND

As ordered.

OPINION

1. Background and IPTAB's Decision

A. Defendant's Registered Design (the "Registered Design")

1) Registration Number / Filing Date of Application / Date of Registration: No. 808210 / October 1, 2014 / July 24, 2015

2) Title of Article: Cosmetics container

3) Drawings: As shown in Appendix 1.

B. Prior Designs and Prior-filed Design[1)]

1) Prior Design 1 (Plaintiff's Exhibit 4)

A) Registration Number / Filing Date of Application / Date of Registration / Publication of Registration: No. 755233 / January 28, 2014 / July 29, 2014 / August 6, 2014.

B) Title of Article: Cosmetics container

C) Drawings: As shown in A of Annex 2.

2) Prior Design 2 (Plaintiff's Exhibits 5-1 to 4)

A) Source: Article posted on ENEWS TODAY website on April 30, 2014, entitled "New Product Holika Holika '99% Aloe Soothing Gel', '92% Aloe Shower Gel'," etc.

B) Title of Article: Cosmetics container

C) Drawings: As shown in B of Annex 2.

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1) Prior Designs 1 and 2 are identical to Cited Designs 1 and 2 and the Prior-filed Design is identical to Cited Design 3.

3) Prior-filed Design (Plaintiff's Exhibit 6)

A) Registration Number / Filing Date of Application / Date of Registration / Publication of Registration: No. 807414 / August 20, 2014 / July 20, 2015 / July 28, 2015.

B) Title of Article: Cosmetics container

C) Drawings: As shown in C of Annex 2.

C. IPTAB Decision (Plaintiff's Exhibit 1)

1) On September 2, 2016 the plaintiff filed a petition with the IPTAB against the defendant who is the owner of design rights, seeking invalidation of the Registered Design for reasons that "As the Registered Design is similar to Prior Designs 1 and 2 (hereinafter referred to collectively as the "Prior Designs") published before the application of the Registered Design, said Registered Design is subject to Article 33(1)(iii) of the Design Protection Act. Also, as the Registered Design is similar to the Prior-filed Design applied before the application of the Registered Design, said Registered Design is subject to Article 46(1) of the Design Protection Act, and therefore shall be invalidated."

2) The IPTAB heard said petition as Case No. 2016Dang2726 and dismissed the plaintiff's petition on January 29, 2018 (hereinafter referred to as "IPTAB decision") for reasons that "Compared to the Prior Designs and the Prior-filed Design, the Registered Design shows differences in that the Registered Design not only has a top section which is blunt and a concentrically oval-shaped cross section, but also has a 3-stepped profile. As such differences are so prominent in its

overall design and are the most dominant characteristic of the Registered Design, the overall aesthetic view thereof is quite different from that of the Prior Designs and the Prior-filed Design. Therefore, the Registered Design is not subject to Article 33(1)(iii) and Article 46(1) of the Design Protection Act."

[Factual Basis] Undisputed facts, statements and videos in Plaintiff's Exhibits 1 to 6 (including hyphenated number, if any. The same applies hereinafter.), and the purport of the overall argument

2. Summary of Parties' Arguments and Questions Presented

A. Summary of Plaintiff's Arguments

Given the circumstances stated below, as the Registered Design is similar to the Prior Designs and the Prior-filed Designs, said Registered Design is subject to Article 33(1)(iii) and Article 46(1) of the Design Protection Act. Therefore, IPTAB's decision which is not consistent with the analysis herein is in error and shall be revoked.

1) The dominant features of the Prior Designs are as follows: ① The girth is gradually decreasing from the bottom to the top, and the end of the container is curved to one side; ② When looking at the container from the side, one side is flat and the corresponding side is convex, and such convex shape grows as it goes from the top to the bottom; ③ When looking at the container from the top, its left-right width is larger than its up-down width. As such characteristics are the unique features of the Prior Designs, the range of similarity should be widely viewed, and the Registered Design is similar to the Prior Designs in dominant features, giving a similar overall aesthetic

look.

2) Looking at the type of display of the actual product in which the Registered Design is embodied, as the stepped profile, which is one of the main differences that the defendant is arguing, is not prominent, and such product delivers a very similar aesthetic look that is hard to distinguish from the Prior Design 2, it is hard to say that the differences of the Registered Design overpower said dominant features and bring a different aesthetic look from the Prior Designs.

3) Comparing the Registered Design to the Prior-filed Design, what both designs have in common is that both designs have a stepped profile, and even if there are differences between said stepped profiles, such differences are neither prominent nor easy to distinguish. In particular, when looking at them from the front and the rear, it is difficult to distinguish the differences in these two stepped profiles, so the Registered Design provides a similar aesthetic look to the Prior-filed Design.

B. Summary of Defendant's Arguments

Given the circumstances stated below, as it is hard to see that the Registered Design is similar to the Prior Designs and the Prior-filed Design, the IPTAB's decision that is consistent with the analysis herein is well grounded.

1) As the shape in which the lid of the article is located at the bottom, the bottom section is wide while the body becomes narrower as it goes up toward the top section, and the end of the container is curved to one side has already been disclosed

in the existing designs published before the application of the Registered Design, the range of similarity to discuss herein should be narrowed. And, as the Registered Design is different from the Prior Designs in that said Registered Design not only has a top section which is blunt and a concentrically oval-shaped top view, but also has a stepped profile, such differences provide a different overall aesthetic look from the Prior Designs.

2) Although the Prior-filed Design has a stepped profile, as the shape has been widely used for cosmetics containers for a long time with a wide range of variations, the range of similarity to consider herein should be narrowed. However, unlike the Prior-filed Design, the Registered Design not only has a top section which looks blunt, a concentrically oval-shaped top view, and a side view which has the appearance of nail-shaped steps that are overlaid at regular intervals forming a shape similar to a bamboo stem, but also has a front side that is integrated with the rear side, providing a smooth appearance. Due to such differences, the Registered Design provides an overall aesthetic appearance that is not similar to the Prior-filed Design.

C. Questions Presented

Therefore, the questions presented can be summarized as whether the Registered Design is subject to Article 33(1)(iii) and Article 46(1) of the Patent Act, as it is similar to the Prior Designs and the Prior-filed Design. Specifically, they can be summarized as follows; ① Whether the dominant features of Prior Designs that the plaintiff is arguing can be acknowledged as original and thus the range of similarity of the designs are widely set; and ② whether the differences

of the Registered Design that the defendant is arguing sufficiently overpower the dominant features that the plaintiff is arguing to provide an aesthetic or creative value generating different aesthetic looks from the Prior Designs or the Prior-filed Design.

3. Whether Registered Design is Similar to Prior Designs

A. Legal Principle

As the similarity of designs should be determined based on whether a person observing the overall appearance can perceive the difference in their aesthetic looks, rather than comparing each of the elements comprising the entire design, both designs should be considered as similar if the dominant features are similar to each other, even if there are minor differences (see Supreme Court Decision 2005Hu2274 ordered on September 8, 2006). In addition, not only the aesthetic looks at the time of using a product in which such design is embodied, but the aesthetic looks at the time of dealing such product should be taken into account as well (see Supreme Court Decision 2000Hu129 ordered on May 15, 2001). If a person observing such designs feels that they look the same or different depending on the viewing direction, they should be compared by observing them in a direction from which they look the same (see Supreme Court Decision 2010Hu722 ordered on May 27, 2010).

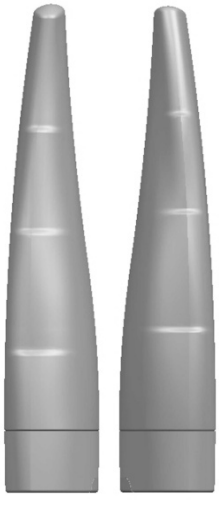
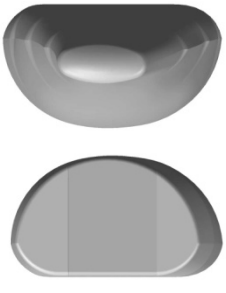
B. Whether Articles Are Identical or Similar

The articles embodying the Registered Design and the Prior Designs are the same as they are all “cosmetics containers”.

C. Design Similarity

1) Summary of Registered Design and Prior Designs

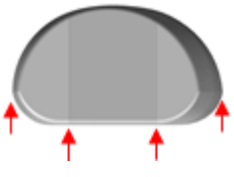
Classification	Registered Design	Prior Design 1	Prior Design 2
Perspective view			
Front/ Rear view			

Classification	Registered Design	Prior Design 1	Prior Design 2
			
Side view			
Top/ Bottom view			(no top view available) 

2) Commonalities

The Registered Design and the Prior Designs have commonalities in that: ① as shown in  ,  and  , both containers have a shape in which the bottom section is wider and the girth decreases as it goes to the top section; ② as shown in  ,  and  , the lid of the article is located at the bottom section of the container and its size is similar in the three designs; ③ as shown in  ,  and  , the top section of the container is curved to one side and the degree of curve is very similar in the three designs; ④

based on the side view, as shown in  ,  and  , the one side is flat in the vertical direction while the other side is curved outward and the curved shape grows as it goes down to the bottom;

⑤ based on the bottom view, as shown in  ,  [2] and  , the left-right width is longer than the up-down width, and the bottom surface is shaped like a chestnut, and ⑥ as shown in  ,  [3] and  , the location of the curved points on the bottom surface is almost identical in the three designs.

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2) Rotated 180° for comparison convenience

3) Rotated 180° for comparison convenience

3) Differences

ⓐ Based on the perspective view and front/rear view, as shown in  , the top section of the Registered Design has a curved shape, while the top section of the Prior Designs is shaped to be pointed as shown in  and  ; ⓑ based on the top view, as shown in  , the Registered Design is concentrically oval-shaped, while Prior Design 1 is amorphous as shown in  , and Prior Design 2 also appears to be amorphous as in Prior Design 1 based on its overall similarity even though the top view for Prior Design 2 is not submitted; and ⓒ based on the side view, the Registered Design has three stepped-profiles as shown in  , and from the front and rear view, each side of the container has a stepped look as shown in  , in which such steps are slightly sloped, while the Prior Designs are not stepped and have smooth profile lines as shown in


,

and

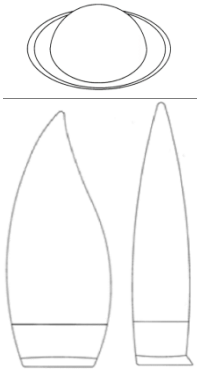
,

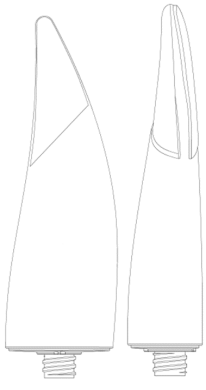
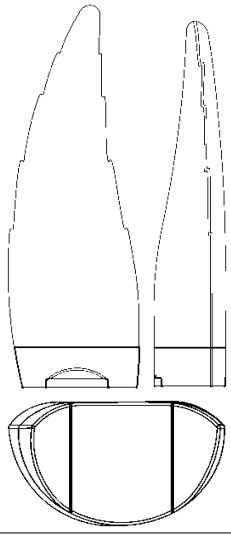
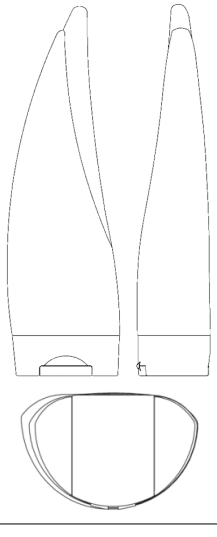
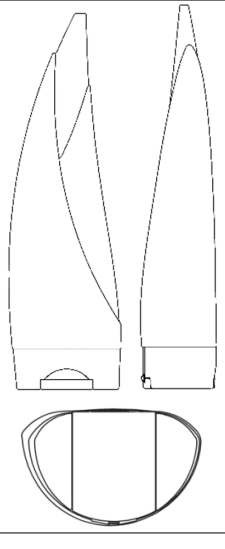
.

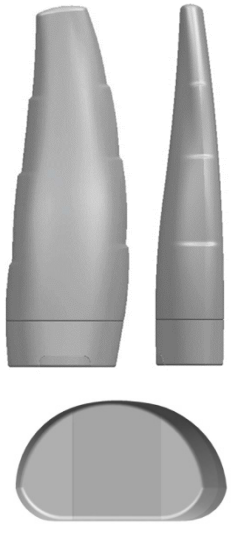
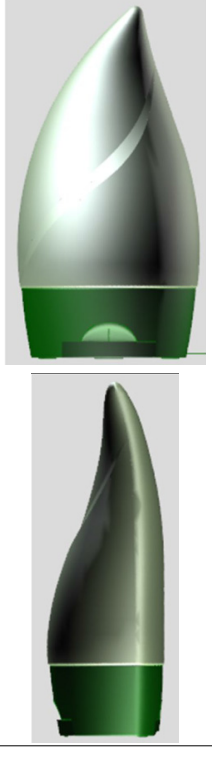
4) Dominant Features of the Registered Design and the Prior Designs

A) Trends in Development of Design for Cosmetics Containers

Products with a container having a shape in which the lid is located at the bottom, the bottom section is wide and the girth becomes smaller as it goes to the top, and the upper part is curved to one side, when compared, show the development trends in design as follows (front view, right view, and bottom view, if available).

Publicly-known Design 1 (Plaintiff's Exhibit 11)	Publicly-known Design 2 (Plaintiff's Exhibit 10)	Publicly-known Design 3 (Plaintiff's Exhibit 12)
		
Filing date March 17, 2006 Registration date: July 28, 2006 Registration number: No. 421498	Filing date: December 14, 2006 Registration date: April 4, 2007 Registration number: No. 446026	Filing date: July 26, 2010 Registration date November 25, 2010 Registration number: No. 579578

Prior Design 1 (Plaintiff's Exhibit 4)	Prior Design 2 (Plaintiff's Exhibit 5)	Related Design 1 (Plaintiff's Exhibit 14)
		
Filing date: January 28, 2014 Registration date: July 29, 2014 Registration number: No. 755233	Time when it became available for the public via telecommunication line: April 30, 2014	Filing date: August 14, 2014 Registration date: October 14, 2014 Registration number: No. 766832
Prior-filed Design (Plaintiff's Exhibit 6)	Related Design 2 (Plaintiff's Exhibit 15)	Related Design 3 (Plaintiff's Exhibit 16)
		

Filing date: August 20, 2014 Registration date: July 20, 2015 Registration number: No. 807414	Filing date: August 22, 2014 Registration date: October 14, 2014 Registration number: No. 766952	Filing date: August 22, 2014 Registration date: October 16, 2014 Registration number: No. 767402
Registered Design	Related Design 4 (Plaintiff's Exhibit 18)	Related Design 5 (Plaintiff's Exhibit 17)
		
Filing date: October 1, 2014 Registration date: July 24, 2015 Registration number: No. 808210	Filing date: December 24, 2014 Registration date: July 8, 2015 Registration number: No. 805659	Filing date: March 23, 2015 Registration date: January 29, 2016 Registration number: No. 838067

B) Dominant Features of the Prior Designs

In consideration of the development trends in the above designs, although the Publicly-known Designs 1 to 3 had been published before

the Prior Designs and there are similarities between them, given the circumstances stated below, it can be said that the above commonalities ①, ③ to ⑥ between the Registered Design and the Prior Designs are dominant features that cannot be observed in Publicly-known Designs 1 to 3, and provide new and original aesthetic looks.

(1) While the Publicly-known Designs 1 to 3 show a shape that becomes thicker from the bottom to the middle and then becomes thinner from the middle to the top, the Registered Design or the Prior Designs show a shape that becomes gradually thinner from the bottom to the top. Therefore, it is hard to say that the Registered Design or the Prior Designs provide the same aesthetic look as the Publicly-known Designs 1 to 3.

(2) Particularly with regard to commonalities ④ and ⑤, the Registered Design or the Prior Designs show a shape in which one side is flat in the vertical direction and the other side is curved outward, such curved shape becomes larger as it goes from the top to the bottom, and consequently the bottom surface is shaped like a chestnut, which delivers an aesthetic look that cannot be observed in the publicly known 1 or 3, and which cannot be said to be a shape that has been widely adopted in the pertinent art.

(3) Even in consideration of the time of application of related designs, details of application and history of invalidation for reasons of similarity to the Prior Designs, the originality of commonalities between the Registered Design and the Prior Designs such as the abovementioned commonality ① and ③ to ⑥ is indirectly supported. In other words, according to the statements in Plaintiff's Exhibits 13 to 18 and the purport of the overall argument, as it is acknowledged that the Related Designs 1 to 5 above containing all of the said commonalities ① and ③ to ⑥ between the Registered Design and the Prior Designs was applied in succession after the Prior Designs were applied or published, and such related designs were invalidated afterwards for the reasons of similarity to the Prior Designs, the said

commonalities ① and ③ to ⑥ that the Prior Designs contain have delivered new sophisticated aesthetic looks that have not been observed in the pertinent industry, and have motivated competitors to imitate such design.

(4) The statements in Plaintiff's Exhibits 19 to 21 show that the Prior Design 2 originated from an aloe shape as a motif and was awarded the grand prize in the '2014 Good Design Awards' sponsored by the Minister of Trade, Industry and Energy, and held by Korea Institute of Design Promotion, and that even the Prior Design 1 is also characterized by its aloe-like look, the said commonalities ① and ③ to ⑥ that the Prior Designs have is the first one that has created new aesthetic looks that cannot be observed in the Publicly-known Designs 1 to 3; in other words, a new design for a cosmetics container which is shaped in the form of an aloe leaf.

5) Results of Comparison

A) Principle of Comparison

As discussed above, design similarity should be determined by whether a person observing the overall appearance can perceive the differences in looks, rather than individually comparing each of the elements comprising the entire design, and if the observer feels that both designs look identical or different depending on the viewing direction, they should be observed in the direction from which they look identical or similar to properly determine their similarity. Therefore, the Registered Design and the Prior Designs should be compared under such criteria for similarity.

The aesthetic looks of the Registered Design and the Prior Designs observed from the left and right side views and the top and bottom views are more similar to each other than those observed from the front and rear views, so the similarity of the two designs should be judged based on their side views and rear views.

B) Similarity of Dominant Features

As discussed above, the Registered Design and the Prior Designs are in common in relation to the dominant features ① and ③ to ⑥, and as it is acknowledged that said commonalities have a significant level of importance in their overall designs, are very prominent and contain the dominant features of the Prior Designs which have adopted the shape of aloe as a motif, such designs make the observer perceive a similarity in their aesthetic looks.

C) Analysis of Differences

As the dominant features of the Prior Designs are novel and original, a relatively large range of similarity should be applied to determine design similarity. Thus, to see that the Registered Design is different from the Prior Designs in terms of aesthetic looks, the differences in the Registered Design should be such that can overpower said dominant features and provide aesthetic values or creativity sufficient to arouse a different aesthetic sense.

First, with regard to the difference ⓐ between the Registered Design and the Prior Designs, although there seems to be some differences in this part from the perspective view and front/rear view, such differences are almost unnoticeable when observed from the side views. Furthermore, such variation can be regarded as ordinary, so it is hard to say that a new aesthetic sense is aroused from such differences. Next, with regard to difference ⓑ between the Registered Design and the Prior Designs, it does not seem reasonable to expect that most consumers or dealers will look at the top view of the container carefully at the time of use or sale, which means that it is not easy to recognize or find such minor differences and therefore, such variation has minor importance in the overall design and delivers a small level of aesthetic value.

Finally, with regard to the difference ⓒ between the Registered Design and the Prior Designs, given that the Registered Design has three shallowly stepped profiles on each side, which has low

importance in its overall design and still gives a smooth appearance as in the Prior Designs, and in actual products, such stepped profile is almost unnoticeable as shown in the comparison table below while these are embodiments, it is hard to say that such differences can induce different aesthetic sense that is beyond the common aesthetic sense originating from said dominant features.[4)]

Comparison of actual product to which the Registered Design is applied with Prior Design 2 (Plaintiff's Exhibit 22)	
	

D) Summary of Discussion

Therefore, even if there are minor differences between the Registered Design and the Prior Design, given the aforementioned commonalities that can be recognized when observing the overall

4) As mentioned above, when discussing the design similarity to the prior designs, the defendant has even admitted that such stepped design is an easy variation that has been widely used for a long time.

appearances of those designs, both designs have similar dominant features, and therefore deliver similar overall aesthetic looks.

6) Discussion on Defendant's Arguments

The defendant argues that the Registered Design is not similar to the Prior Designs because the Prior Designs have adopted the shape of aloe as a motif, while the Registered Design has a stepped profile that makes it look like bamboo stem.

However, it is stated on the registration gazette that the Registered Design has adopted the “shape of a leaf” as a motif (Plaintiff's Exhibit 2), which is not consistent with the defendant's argument that the Registered Design embodies a bamboo stem. Moreover, as shown above, the actual product to which the Registered Design is applied has a transparent green color and an additionally added aloe shape, which makes it difficult to accept the aforementioned defendant's argument as it is.

The defendant also argues that the Prior Designs are just such that have adopted the shape of aloe, a kind of natural form, to the cosmetics container, and therefore, it is not fair to accept a wide range of similarity as none of the cosmetics containers that embody the shape of aloe can claim any rights on their designs.

In consideration of such argument, as discussed above, although it is acknowledged that the Prior Designs have adopted the shape of aloe as a motif, given not only that the shapes of aloe existing in a natural state vary, but that the Prior Designs are such that have embodied the characteristic feature of the aloe to a cosmetics container, it is hard to see that such design is just a simple imitation of the shape of aloe.[5] Moreover, it can be said that there are sufficient chances to create an aloe-shaped design that is different from the Prior Designs in terms of

5) As discussed above, the Prior Design 2 was credited for its originality and was awarded the grand prize at “2014 Good Design Awards” in the daily goods package sector.

the overall appearance, ratio, degree of curve, or the shape of the side section. Therefore, the aforementioned defendant's argument is not well grounded and shall not be accepted.

4. CONCLUSION

Based on the foregoing, the Registered Design is a design that is similar to the Prior Designs which had been published or made available to the public via telecommunication lines before the application of the Registered Design was filed. Thus, without further discussion on the plaintiff's remaining arguments for invalidation, the Registered Design shall be invalidated pursuant to Article 33(1)(iii) and Article 121(1) of the Design Protection Act.

Consequently, the IPTAB erred in its decision which is not consistent with the above analysis. Therefore we grant the plaintiff's petition and revoke the IPTAB's decision. The costs arising from this litigation shall be borne by the defendant.

Presiding Judge Seungryul SEO
Judge Yunhyung JEONG
Judge Donggyu KIM

[Appendix 1] Registered Design

[Article to Which Design Is Applied]
Cosmetics container

[Description of Design]
1. The material is synthetic resin.
2. Fig. 1.1 depicts the whole shape of the design. Fig. 1.2 depicts the front view of the design. Fig. 1.3 depicts the rear view of the design. Fig. 1.4 depicts the left view of the design. Fig. 1.5 depicts the right view of the design. Fig. 1.6 depicts the top view of the design. Fig. 1.7 depicts the bottom view of the design.

[Summary of Design Creation]
As the article of this design, which is a “cosmetics container” has adopted a shape of leaf as a motif, and has a stepped profile on each side of the body, it not only gives a new aesthetic sense and a sense of stability, but creates a more sophisticated and neat look.

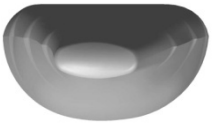

[Fig. 1.1]


[Fig. 1.2]


[Fig. 1.3]

[Fig. 1.4]

[Fig. 1.5]



[Fig. 1.6]

[Fig. 1.7]

END

[Appendix 2] Prior Designs and Prior-filed Design

A. Prior Design 1 (Design Registration No. 755233)

[Article to Which Design Is Applied]
Cosmetics container

[Description of Design]

1. Fig. 1.1 depicts the whole shape of the design.
   Fig. 1.2 depicts the front view of the design.
   Fig. 1.3 depicts the rear view of the design.
   Fig. 1.4 depicts the left view of the design.
   Fig. 1.5 depicts the right view of the design.
   Fig. 1.6 depicts the top view of the design.
   Fig. 1.7 depicts the bottom view of the design.
2. The material is synthetic resin.
3. In this design, the body of the container is transparent or translucent.

[Summary of Design Creation]

The combination of the shape, form and colors of a “cosmetics container” is the key factor of this design creation.

[Fig. 1.1]

[Fig. 1.2]

[Fig. 1.3]

[Fig. 1.4]

[Fig. 1.5]

[Fig. 1.6]

[Fig. 1.7]

B. Prior Design 2

C. Prior-filed Design (Design Registration No. 807414)

[Article Subject to Design]
Cosmetics container

[Description of Design]
1. Fig. 1.1 depicts the whole shape of the design.
   Fig. 1.2 depicts the front view of the design.
   Fig. 1.3 depicts the rear view of the design.

Fig. 1.4 depicts the left view of the design.

Fig. 1.5 depicts the right view of the design.

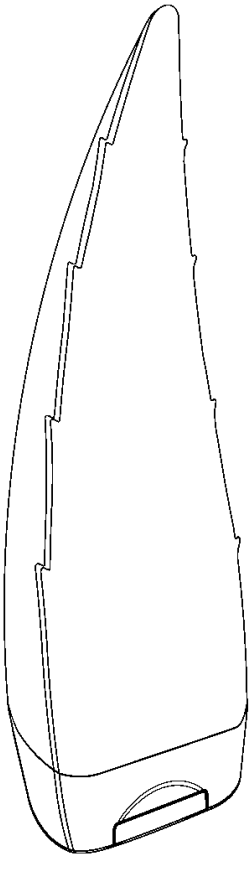
Fig. 1.6 depicts the top view of the design.

Fig. 1.7 depicts the bottom view of the design.

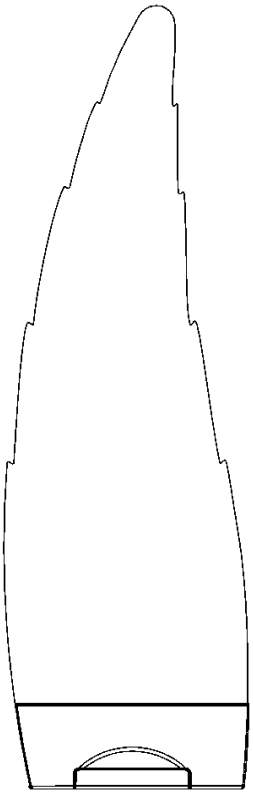
2. The material is synthetic resin or glass.

[Summary of Design Creation]

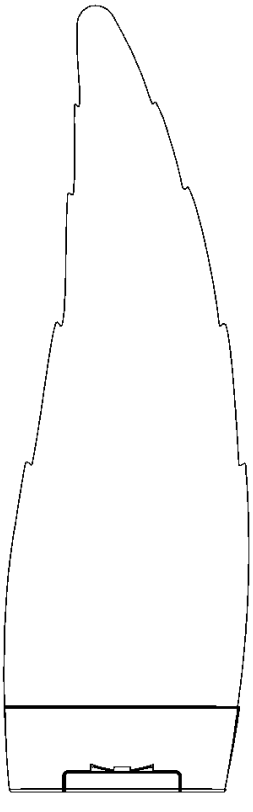
The combination of the shape and form of a “cosmetics container” is the key factor of this design creation.



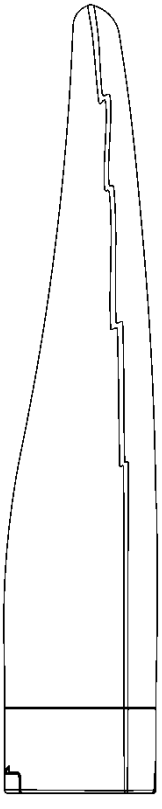
[Fig. 1.1]



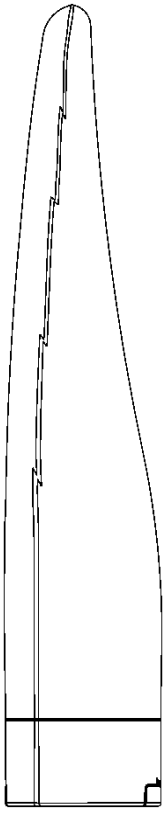
[Fig. 1.2]



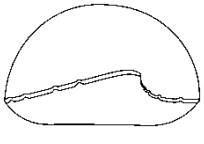
[Fig. 1.3]



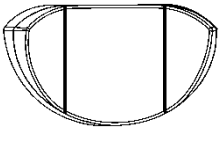
[Fig. 1.4]



[Fig. 1.5]



[Fig. 1.6]



[Fig. 1.7]

END

PATENT COURT OF KOREA
THIRD DIVISION
DECISION

Case No.: 2017Heo8565 Scope of Rights Confirmation (Design)

Plaintiff: Habalan Med & Beauty Co., Ltd.

Defendant: A

Date of Final Trial: June 15, 2018

Decision Date: August 10, 2018

ORDER

1. The IPTAB Decision 2017Dang1440 dated December 27, 2017 shall be revoked.

2. The cost arising from this litigation shall be borne by the defendant.

PLAINTIFF's DEMAND

As ordered.

OPINION

1. Background

A. Defendant's Registered Design at Issue (Plaintiff's Exhibits 2 and 3) (hereinafter the “Registered Design”)

1) Filing Date of Application/ Date of Registration/ Registration Number: June 11, 2015/ December 23, 2015/ No. 832285

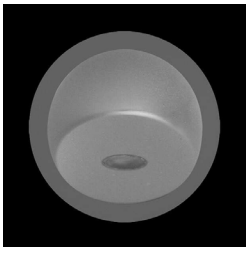
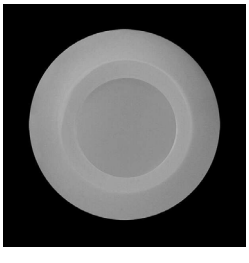
2) Article to which design is applied: Massage unit for skin care

3) Main content and drawing

Description of Design
1. The massage unit is made of synthetic resins. 2. The Registered Design relates to a massage unit for skin care, including a head and a handle, that is composed of unique and three-dimensional shape that reminds of a spoon and expresses aesthetic senses different from the existing massage units. A head of the Registered Design is equipped with a LED lamp. 3. Figs. [1.1] through [1.7] show a perspective view for overall shape, front view, rear view, left side view, right side view, top and bottom view. The Reference Fig. [1.1] is a drawing that illustrates the use state in which colors are added to the Registered Design. The Reference Fig. [1.2] is a drawing that illustrates the use state in which the LED is omitted from the head of the Registered Design and colors are added. As illustrated in the Reference Fig. [1.2], the LED may be omitted from the head of the Registered Design. 4. The Registered Design relates to the massage unit for skin care that, if a user holds the handle and puts its head onto the skin surface, generates vibration and ions and activates LED rays for the use on the face and the whole body. The Registered Design will be effective in the skin care, such as skin elasticity, anti-aging, etc. by improving the skin absorption rate of skin care ingredients with ion generation, vibration, LED ray, etc.

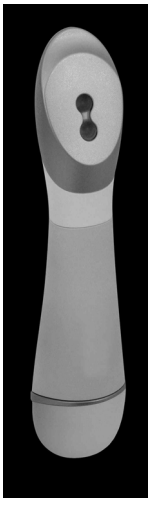
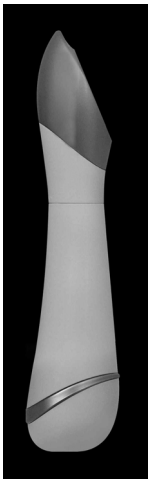
Essence of the Design Creation
The combination of shape and form of the “massage unit for skin care” is the essence of the design creation.

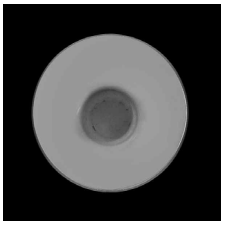
[Fig. 1.1]	[Fig. 1.2.]	[Fig. 1.3.]	[Fig. 1.4]	[Fig. 1.5]
				

[Fig. 1.6]	[Reference Fig. 1.1]	[Reference Fig. 1.2]
		
[Fig. 1.7]		
		

B. Design Subject to Confirmation (Appendix 2 of Plaintiff's Exhibit No. 1)(hereinafter the "Design for Review")

The main drawings of the design for the "massage unit for skin care" that the defendant specifies as a product that the plaintiff practiced are as follows:

[Perspective View]	[Front View]	[Rear View]	[Left Side View]	[Right Side View]
				

[Top View]	[Bottom View]
	

C. IPTAB Decision

1) On May 11, 2017, the defendant who is the holder of the

design right in the Registered Design argued that “since the articles of the Design for Review and the Registered Design are the same and the shape and form of the Design for Review that the plaintiff practices is identical or similar to those of the Registered Design, the Design for Review falls within the protection scope of the Registered Design” and petitioned for affirmative confirmation trial for the scope of rights as to the Design for Review.

2) Thus, IPTAB heard the said petition for trial by the defendant as Case No. 2017Dang1440 On December 27, 2017, IPTAB stated that “the subject article of the Design for Review is identical to that of the Registered Design and the overall aesthetic sense of the Design for Review is similar to that of the Registered Design. Thus, the Design for Review falls within the protection scope of the Registered Design.” and rendered the decision at issue granting the defendant's petition (Plaintiff's Exhibit 1).

2. Summary of Parties' Arguments

A. Plaintiff's Argument

Due to the following reasons, the overall aesthetic sense of the Design for Review is not similar to that of the Registered Design. Thus, it may not be deemed that the Design for Review falls within the protection scope of the Registered Design. However, the IPTAB determined otherwise and thus erred in its decision.

1) A head that has an inclined elliptical contact member common in the Design for Review and the Registered Design and a

cylindrical handle that is separated from the head and easy to grasp are already known as a massage unit for skin care or just fundamental and functional shape provided for the product's function. Thus, the head and the handle have little importance when determining the similarity of the Design for Review and the Registered Design.

2) However, the aesthetic sense of the Design for Review is different from that of the Registered Design due to the following characteristic constitution.

a) The Design for Review has a groove member in a crescent shape at the upper part of contact member which is on the front side of the head, as well as two circular LED lamps connected to each other like a shape of a peanut.

b) The design of the Design for Review gives a sense of unity with an upper line bordering the head matching a band formed down the handle.

c) Unlike the handle of the Registered Design, which will be recognized as the same shape from all directions, the handle of the Design for Review is designed so that its rear would protrude more than its front and its lower part would protrude more than its upper part.

B. Defendant's Argument

Due to the following reasons, the Design for Review falls within the protection scope for the Registered Design. Thus, the IPTAB decision ruling the same should be upheld.

1) The Registered Design and the Design for Review both have

an inclined contact surface in a shape of ellipse, a LED display member formed on the inclined surface, a cylindrical handle with a lower part thicker than the upper part and a round bottom part, and a connection member that has a shape of a truncated circular cone that narrows as it goes down, connecting the contact member and the handle. The overall aesthetic senses of the Registered Design and the Design for Review are similar in that the position, importance, and composition of the contact member, connection member, and handle are in common.

2) The Registered Design and the Design for Review are different only in their commercial or functional modifications which will not affect their overall aesthetic sense.

3. Similarity of Registered Design and Design for Review[1)]

A. Legal Principle

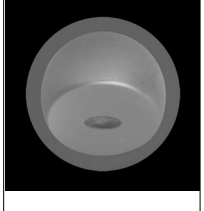
Whether the designs are identical or similar should be determined not by comparing separate elements that composes the designs but by comparing the overall designs with each other to decide the aesthetic senses that viewers would feel from the designs as a whole. Even if the designs have publicly known shapes among their elements, the identity or the similarity of designs, unless the publicly known shapes do not deliver any special aesthetic sense, the shapes should be included in the analysis to determine the overall aesthetic sense of the

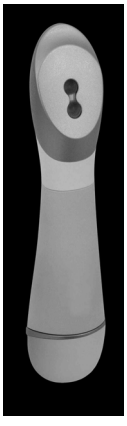
1) The subject articles of the Design for Review and the Registered Design are the massage unit for skin care. In this regard, both parties do not raise an argument. Thus, we will examine only the similarity of the Design for Review and the Registered Design.

design. However, a design right is awarded to the combination of novel shape, form and color of an article. Even if a design is registered by an application that includes publicly known shape and form, an exclusive right cannot be admitted for the publicly known parts. Thus, the publicly known parts shall be of little importance when determining the protection scope of the design right. Thus, even if a registered design and a design to which the registered design is compared are identical or similar in their publicly known parts, the latter does not fall within the protection scope of the registered design unless the unique parts in the registered design excluding the publicly known parts are similar to the relevant parts in the compared design (see Supreme Court Decision 2003Hu762 dated April 30, 2004).

On the other hand, where the parts common in both designs are what must naturally exist in the article or are the fundamental or functional shape of the designs, they have little importance. Thus, even if they are identical or similar, it may not be deemed that both designs are identical or similar (see Supreme Court Decision 2003Hu1666 dated October 14, 2005).

B. Comparison of Designs

Type	[Perspective View]	[Front View]	[Rear View]	[Side View]	[Top View]
Registered Design					

Type	[Perspective View]	[Front View]	[Rear View]	[Side View]	[Top View]
Design for Review					

C. Analysis of Commonalities and Differences

1) Commonalities

a) The body is composed of a contact member with an inclined surface as a whole, a cylindrical handle and a connection member that connects the contact member and the handle.

b) The front of the contact member is an inclined surface with a shape of ellipse and their angles are almost identical. The LED display member is located at the center of the inclined surface. Also, the rear side of the contact member is convex outward.

c) The handle member forms a cylindrical shape as a whole and the diameter of the lower part is wider than that of the upper part.

2) Differences

a) The Registered Design has a contract member, which has an inclined surface in a shape of single ellipse. One circular LED is formed in the middle of the inclined surface. On the other hand, the

Design for Review has an additional crescent surface at the upper part of an inclined surface in the contact member, and two circular LEDs are interconnected at the center of the contact member.

b) In the Design for Review, a gap between the inclined surface in the contact member and the connection member is rather wide. The upper part border line of the connection member is inclined upward when viewed from the rear and forms a diagonal line when viewed from the side. On the other hand, in the Registered Design, a gap between the inclined surface and the connection member is narrower than that in the Design for Review. The upper part border line of the connection member is declined downward when viewed from the rear and forms a gradual curve with the center being convex upwards when viewed from the side.

c) In the Registered Design, the diameter of the handle remains consistent until a particular point where it starts to increase. The inclination viewed from the front, rear, left and right are the same. On the other hand, in the Design for Review, the diameter of the handle becomes wider at a constant rate as it goes downwards and the inclination at the rear is steeper than that at the front.

d) The Registered Design does not have a band in the handle. On the other hand, the Design for Review has a band along the handle. The band is arranged in a shape that goes downwards when viewed from the rear.

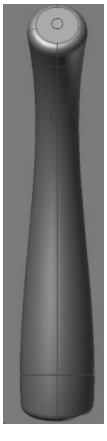
3) Analysis

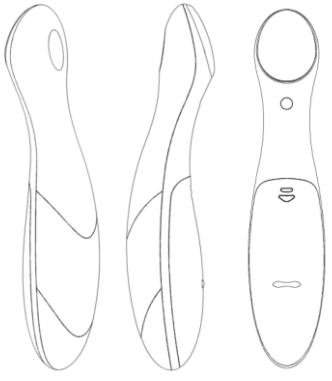
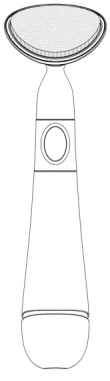
The general consumers or traders would have different aesthetic senses from the Design for Review and the Registered Design due to the following reasons and thus they are not similar.

a) First, the massage unit for skin care, which is the subject article of both designs, is an article that generates beauty treatment effects by the user holding the handle, rubbing the contact member on

the skin surface, such as face, etc. and facilitating the permeation of cream, etc. Thus, the composition of the contact member with a constant inclined surface and the handle should be seen as the fundamental or functional shape that should naturally exist in an article that performs the said functions.

b) Also, the compositions of the followings are, as illustrated in each drawing shown below, what have already been disclosed in the massage unit for skin care or beauty treatment device closely related thereto prior to the application of the Registered Design: (i) the connection member that connects the contact member and the handle (Plaintiff's Exhibit 13); (ii) an elliptical inclined surface (Plaintiff's Exhibits 5, 6, 9 and 10); (iii) LED display member at the center of the inclined surface (Plaintiff's Exhibits 7 and 8); (iv) the rear of the contact member in a form of curve that is convex outwards; and (5) the cylindrical handle with a diameter at the lower part wider than that at the upper part.

Plaintiff's Exhibit 5	Plaintiff's Exhibit 6	Plaintiff's Exhibit 7	Plaintiff's Exhibit 8
			

Plaintiff's Exhibit 9	Plaintiff's Exhibit 10	Plaintiff's Exhibit 13
		

c) As such, the parts common in the Registered Design and the Design for Review are designs that are already publicly known prior to the application of the Registered Design or fundamental and functional shapes. Thus they shall be of little importance when determining the similarity of both designs. Meanwhile, the differences in both designs as discussed above are the unique parts that form aesthetic senses and attract the attention of the viewers.

d) Then there exist substantial differences that can offset some commonalities in both designs in the aspects of their shapes and forms. And the general consumers and traders that encounter both designs would feel different aesthetic senses as a whole from the said differences in both designs. Thus, the two designs are not similar.

4. Conclusion

Therefore, the Design for Review does not fall within the protection scope of the Registered Design because the aesthetic sense of the Design for Review is different from that of the Registered Design. The IPTAB decision concluding otherwise is erroneous and the plaintiff's

petition to revoke the IPTAB decision is well grounded.

Presiding	Judge	Kyuhong LEE
	Judge	Sungyop WOO
	Judge	Jinhee LEE