

Inventive Step of Invention

Japan Patent Office

Asia-Pacific Industrial Property Center, JIII

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1. Introduction

The patent system grants as compensation to those who publish details (file a patent application) of a new technology an exclusive right called the “patent right” for a given period under given conditions, while providing third parties with the opportunity of using such published technology. This system is designed to encourage technological progress and contribute to the development of industry.

However, to grant patent rights to products that could easily have been invented by a person skilled in the art does not contribute to technological progress but, on the contrary, may actually hamper progress.

Therefore, the patent system excludes from the scope of patent grant those inventions, even if they are new, that could easily have been invented by a person skilled in the art. Only those that could not easily have been invented by a person skilled in the art, in other words, inventions that have an inventive step, are eligible for patent grant.

The Patent Act specifically provides as follows:

[Patent Act Article 29, paragraph 2]

Where, prior to the filing of the patent application, a person ordinarily skilled in the art of the invention would have been able to easily make the invention based on an invention prescribed in any of the items of the preceding paragraph, a patent shall not be granted for such an invention notwithstanding the preceding paragraph.

(Reference) [Patent Act Article 29, paragraph 1.1 to 1.3]

- (i) inventions that were publicly known in Japan or a foreign country, prior to the filing of the patent application;
- (ii) inventions that were publicly worked in Japan or a foreign country, prior to the filing of the patent application; or
- (iii) inventions that were described in a distributed publication, or inventions that were made publicly available through an electric telecommunication line in Japan or a foreign country, prior to the filing of the patent application.

Additionally, Part II Patentability, Chapter 2 Novelty and Inventive Step, 2. Inventive Step of the Examination Guidelines for Patent and Utility Model specifies the procedure for determining whether or not the claimed invention involves an inventive step, so that examiners can objectively and logically make a determination of whether or not “the invention is one that a person ordinarily skilled in the art of the invention could have easily invented”, in other words, whether or not it is an invention that involves an inventive step, and can make a uniform determination without wide variation between individual examiners.

According to these examination guidelines, examiners should determine whether or not the invention for which a patent is sought involves an inventive step based on whether or not the reasoning that a person skilled in the art could have easily arrived at the invention for which a patent is sought based on whether the cited inventions can be made by constantly considering what a person skilled in the art would do after precisely comprehending the state of the art in the field to which the present invention pertains at the time of the filing.

This textbook first gives a brief explanation of the operation of patent systems in Japan, Europe, and the United States from the perspective of the inventive step, followed by a detailed description of the determination procedure for the inventive step employed in Japan.

2. Systems and Operations in Europe and the United States

(1) Laws and assessment approaches on inventive step in Europe

(i) Provisions of the European Patent Convention

European Patent Convention, Chapter I Patentability

Article 52 Patentable inventions

- (1) European patents shall be granted for any inventions, in all fields of technology, provided that they are new, involve an inventive step and are susceptible of industrial application.

(The rest is omitted.)

Article 54 Novelty

- (1) An invention shall be considered to be new if it does not form part of the state of the art.
- (2) The state of the art shall be held to comprise everything made available to the public by means of a written or oral description, by use, or in any other way, before the date of filing of the European patent application.
- (3) Additionally, the content of European patent applications as filed, the dates of filing of which are prior to the date referred to in [paragraph 2](#) and which were published on or after that date, shall be considered as comprised in the state of the art.

(The rest is omitted.)

Article 56 Inventive step

An invention shall be considered as

involving an inventive step if, having regard to the state of the art, it is not obvious to a person skilled in the art. If the state of the art also includes documents within the meaning of [Article 54, paragraph 3](#), these documents shall not be considered in deciding whether there has been an inventive step.

(Description)

The European Patent Convention specifies that an invention be required to involve an inventive step to be granted a patent. (Article 52 (1))

In addition, the invention for which a patent is sought is considered as involving an inventive step if it has not been obvious to a person skilled in the art after taking everything into consideration such as the state of the art before the filing date of the European Patent Application, namely any publications or oral presentations that have been made public before the filing of the application. (Article 56)

Examiners of the European Patent Office make examinations based on the Guidelines for Examination in the European Patent Office. According to these Guidelines (the Guidelines for Substantive Examination, Part C, Chapter IV (11) (Inventive step)), examiners make a determination whether or not the invention for which a patent is sought is obvious for a person skilled in the art based on the so-called “Problem-solution approach”.

(ii) Problem-solution approach

The problem-solution approach consists of the following three processes:

- a. determine the “closest prior art”;
- b. establish the "objective technical problem" to be solved; and
- c. consider whether the invention for which a patent is sought, starting from the closest prior art and the objective technical problem, is obvious to a person skilled in the art (“could-would” approach).

This is an assessment approach for inventive step that emphasizes technical problems. It is based on the recognition that all inventions are a means of solving technical problems.

A technical problem equals an objective technical problem and does not necessarily match the problem mentioned in the statement. In the course of examination, a new prior art different from that known by the applicant may be found. In such cases, the examiner must take into consideration all prior arts and may sometimes have to reformulate the “objective technical problem” that is to be solved by the invention pertaining to the claimed item of this application (hereafter “the claimed invention”).

Then, whether or not the invention for which a patent is sought is obvious to a person skilled in the art is considered based on the closest prior art (so-called “cited invention” in JPO’s examination guidelines).

In cases where the invention for which a patent is sought corresponds to a combination of compositions disclosed by a prior art, it is, in order to state that this invention is obvious to the skilled person, insufficient for the examiner to show the reason that the skilled person could have combined these compositions but (s)he must show an adequate reason that the skilled person would have combined these compositions.

(2) Laws and assessment approaches on inventive step in the United States

(i) Provisions of the US Patent Act

PART II PATENTABILITY OF INVENTIONS AND GRANT OF PATENTS

CHAPTER 10 PATENTABILITY OF INVENTIONS

35 U.S.C. 100 Definitions.

When used in this title unless the context otherwise indicates -

- (a) The term “invention” means invention or discovery.

(The rest is omitted.)

35 U.S.C. 101 Inventions patentable.

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

35 U.S.C. 102 Conditions for patentability; novelty and loss of right to patent.

A person shall be entitled to a patent unless —

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, or

(The rest is omitted.)

35 U.S.C. 103 Conditions for patentability; non-obvious subject matter.

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

(b) Omitted

(Description)

The US Patent Act specifies that if the difference between an invention for which a patent is being sought and prior art such as publications and publicly announced inventions was obvious to a person skilled in the art at the time the claimed invention was made, it cannot obtain a patent. (Article 103)

Examiners of the US Patent Office perform patent examination based on the Manual of Patent Examining Procedure (MPEP). According to this MPEP (706.02(j) to 706.02 (n)), examiners determine, based on the procedure shown in the Graham decision, whether or not the difference between the subject matter of the invention for which a patent is sought and the prior art is obvious to a person skilled in the art.

(ii) The Graham decision

The Graham decision (Graham v. John Deere Co.) shows the procedure for determining the obviousness under the Patent Act, Article 103 (a). (Page 1, Volume 383, US Reports; Page 459, Volume 148, United States Patent Quarterly (USPQ) (1966))

The overview of the procedure is as shown below:

- 1) to determine the scope and content of the prior art,
- 2) to establish the different points of the prior art and the said claim, and
- 3) to consider the state of the art at that time while taking into consideration secondary matters.

It is said that, in order to argue that the difference between the subject matter of the invention for which a patent is being sought and the prior art is obvious for a person skilled in the art on the grounds that the claimed invention is a combination of the prior art elements, the existence of the statement that indicates the teaching, suggestion, and motivation of the combination identified in the said claim (called the TSM test) must be disclosed.

(iii) The KSR decision

On April 30, 2007, the Supreme Court of the United States rendered a decision regarding the KSR v. Teleflex case on the approach for determining obviousness under the US Patent Act, Article 102 (a). (The United States Patents Quarterly, Second series, vol. 82, 1385, p.1391, 2007)

In this decision, the Supreme Court reversed and remanded the CAFC decision that decided the Teleflex patent to be non-obvious and valid based on the TSM test.

The Supreme Court criticized that CAFC applied the TSM test too rigidly while showing an understanding of the above-mentioned TSM test conducted by CAFC, and presented new criteria for non-obviousness (inventive step). The newly presented criterion for non-obviousness is as follows:

In Sakraida, the Court derived from the precedents the conclusion that when a patent .simply arranges old elements with each performing the same function it had been known to perform. and yields no more than one would expect from such an arrangement, the combination is obvious.

A court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions.

The Supreme Court pointed out that the key to back up the rejection under Article 103 of the US Patent Act is to explicitly state the reason for the claimed invention being obvious. Additionally, the Court admits that the TSM test is nothing more than one of many effective reasonings that can be used for determination of obviousness.

(iv) The examination guidelines of the US Patent Office after the KSR decision.

The US Patent Office published the guidelines on obviousness following the KSR decision. The guidelines state as follows:

Given in (1) to (7) below are the examples of reasoning for supporting the conclusion of obviousness. These are only examples and do not represent all possible reasons.

- 1) Bring about a predictable result by combining prior art elements through a known approach.
- 2) Bring about a predictable result by merely replacing publicly known elements with other elements.
- 3) Improve a similar device (method or product) in an identical manner using publicly known art.
- 4) Bring about a predictable result by applying the publicly known art to the improvement of a publicly known device (method or product).
- 5) Selecting out of the identified, predictable, and limited number of solutions based on the reasonable expectation that obvious attempt may lead to a success.
- 6) Where the change is predictable to a person skilled in the art, attempting to change a publicly known work in an art field based on the incentive of the design or other market forces.
- 7) Change to the prior art by a person skilled in the art through teaching, suggestion, or motivation in the prior art, or arriving at the invention that was claimed by combining the teachings cited in the prior art.

(3) Determination procedures for inventive step/non-obviousness at the Trilateral Patent Offices

The patent offices of Japan, Europe, and the United States specify that not all new inventions will be patented, but that, as a requirement for patent grant, an invention must make a certain level of technological contribution, in other words, involve an inventive step/non-obviousness.

The approach for determining whether or not an invention involves an inventive step/non-obviousness is stated differently in the examination guidelines of the Trilateral Patent Offices of Japan, Europe, and the United States, respectively.

The Trilateral Patent Offices, however, share in common the approach for determining the involvement of an inventive step/non-obviousness in terms of determining whether or not a person skilled in the art would have been able to start from the prior art (cited invention) to arrive at the invention for which a patent is sought (the claimed invention) by finding the difference between the invention for which a patent is sought and the prior art while taking into consideration the then state of the art.

Then, according to case studies on the assessment of inventive step/non-obviousness relating to the hypothetical cases conducted by the Trilateral Patent Offices in 2008, the assessment results on inventive step/non-obviousness relating to individual cases turned out to be more or less identical.

These case studies include the following six cases:

Case 1: Optical information reproducing apparatus that reproduces data by irradiating an optical disk with a laser beam

Case 2: Spring structure of a round rubber plate and a metal plate laminated alternatively and integrated

Case 3: Ladder with a head, bottom, and the first and second rails

Case 4: Book equipped with a pocket

Case 5: Apparatus for milking cows and other animals

Case 6: External mirror system for vehicles

The Trilateral Patent Offices presented identical assessment results showing that the inventions in cases 2, 3, and 4 involved no inventive step/non-obviousness, while the inventions in cases 5 and 6 involved an inventive step/non-obviousness.

Regarding the invention of Case 1, the European Patent Office (EPO) and the US Patent and Trademark Office (USPTO) determined that no novelty was involved while the Japan Patent Office (JPO) determined that novelty was involved but no inventive step. The Trilateral Patent Offices agreed that in Case 1 the invention could not be patented, while their assessment results differed on inventive step/non-obviousness.

3. Examination guidelines on inventive step

Given below is an interpretation of Part II Patentability, Chapter 2 Novelty and Inventive Step, 2. Inventive step of the Examination Guidelines for Patent and Utility Model published by the Japan Patent Office.

[Patent Act, Article 29, paragraph 2]

Where, prior to the filing of the patent application, a person ordinarily skilled in the art of the invention would have been able to easily make the invention based on an invention prescribed in any of the items of the preceding paragraph, a patent shall not be granted for such an invention notwithstanding the preceding paragraph.

(Reference) [Patent Act, Article 29, paragraph 1 (1) to (3)]

- (i) inventions that were publicly known in Japan or a foreign country, prior to the filing of the patent application;
- (ii) inventions that were publicly known in Japan or a foreign country, prior to the filing of the patent application;
- (iii) inventions that were described in a distributed publication, or inventions that were made publicly available through an electric telecommunication line in Japan or a foreign country, prior to the filing of the patent application.

3-1 Purport of the provision of Patent Act Article 29(2)

The purport of the provision of Patent Act Article 29(2) is not to grant a patent to such inventions that were easily made by a person skilled in the art, since granting a patent to such inventions does not contribute to and even hampers the progress of technology.

3-2 Article 29, paragraph 2

Given below are the interpretations of the terms in the provision of Article 29, paragraph 2.

1) “Inventions stated in each item of the preceding paragraph”

"Inventions stated in each item of the preceding paragraph" refers to all inventions that were publicly known in Japan or a foreign country, inventions that were publicly worked in Japan or a foreign country, and inventions that were described in a distributed publication, or inventions that were made publicly available through an electric telecommunication line in Japan or a foreign country, prior to the filing of the patent application.

2) “A person ordinarily skilled in the art of the invention”

“A person ordinarily skilled in the art of the invention” (hereafter “a person skilled in the art”) refers to a person who has the common general knowledge at the time of application in the technical field to which the claimed invention pertains, can employ ordinary technical means for research and development, can exercise ordinary creativity such as material selection and design change, and can comprehend all at the state of the art at the time of application of the technical field to which the claimed invention pertains.

Additionally, a person skilled in the art can comprehend the art in the technical field relating to the technical problem that the invention attempts to solve. There may be some cases where the term is taken as referring to “a team consisting of experts” from more than one technical field rather than an individual.

"State of the art" involves common general knowledge in the technical field and other technical knowledge in addition to the above-mentioned “inventions stated in any of the items of the preceding paragraph”.

3) “a person ordinarily skilled in the art of the invention would have been able to easily make the invention based on an invention prescribed in any of the items of the preceding paragraph prior to the filing of the patent application”

This phrase means that a person skilled in the art, prior to the filing of the patent application, would have been able to easily arrive at the claimed invention by exercising ordinary creative ability based on the invention stated in any of the items of paragraph 1 of Article 29 (cited invention).

3-3 Invention Ruled by Inventive Step Requirement

An invention to be ruled by inventive step requirement is “a claimed invention” which has met novelty requirement.

3-4 Principle of Method of Determining whether a Claimed Invention Involves an Inventive Step

(1) Basic concept

Whether or not a claimed invention involves an inventive step is determined whether the reasoning that a person skilled in the art could have easily arrived at a claimed invention based on cited inventions can be made by constantly considering what a person skilled in the art would do after precisely comprehending the state of the art in the field to which the present invention pertains at the time of the filing.

(2) Concrete procedure

(i) Finding of the claimed invention

To find the claimed invention. To find the claimed invention as described in the claim unless a reason not to exists, for example, the description in the claim is obscure.

(ii) Finding of the cited invention

To find the inventions that are publicly known, publicly worked, described in printed publications or made publicly available through an electric telecommunication line.

Given below is a description of finding of the invention described in the prior technical document discovered through prior art search, etc. (hereafter “cited document”) (hereafter “cited invention”).

Finding such as “invention of paint described in the test example of the cited document” is inappropriate for finding a cited invention. It is required to definitely find a cited invention by describing the matter that identifies the cited invention; for example, the cited document describes the invention of “the paint composition consisting of A, B, and C”.

Finding of a cited invention is frequently made in accordance with the description of the claim while referring to the described matters of the detailed explanation of the invention where the cited document is a patent document and the invention described in the scope of the patent claim is handled as the cited invention.

On the other hand, where the cited document is an academic document, such a document has no item describing the scope of patent claim or the like that intentionally identifies the invention disclosed in the document but has technical knowledge described from an academic viewpoint. Therefore, it is necessary to pay sufficient attention and deal with, in a careful manner, the issues of what invention should be selected for finding out of such an academic document and what defining matters should be used to identify and describe the invention to be found. In particular, it is necessary to deliberately consider from the aspect of whether or not it can be said that a person skilled in the art can comprehend the cited invention based on the matters described or equal to being described in the academic document.

Even where the cited document is a patent document, the same care must be taken in finding of the cited invention based on the described matters on a conventional art or compared example.

It is not an easy task to find the invention described in a cited document. It is a task almost as difficult as making determination as to whether it is easy or not to make the invention. Actually, the court often points out, also in a revocation action, that the cited invention has been mistakenly found.

Many of the mistaken findings of cited inventions are caused by the fact that the finding of a cited invention is attempted by extracting only convenient portions from the cited documents in order to make a "comparison" with the claimed invention, the next process, easy by trying to find the cited invention using the form of expression and terms similar to those for the claimed invention so as to make "reasoning", the next process, for stating that making the invention is easy.

(Examples of mistakes found in the finding of a cited invention)

- 1) A cited invention is found by adding an interpretation beyond the described matters so as to make reasoning for comparison easier; for example, the invention of the paint to which X has been added as stabilizer while the document for paint has no description regarding the purpose of adding ingredient X or its effect.
- 2) To identify the cited invention using the terms and the form of expression used in the claimed invention with no explanatory notes added so as to make comparison with the claimed invention easier.

For example, it may be the case where it is found that the cited document has the description on the invention of the composition including soft anhydrous silicic acid where the claimed invention is a cosmetic material including soft anhydrous silicic acid and the cited document has the description on the cosmetic material including highly dispersible silica.

For cases other than the one where it is clear that, for example, "hakkin (the Japanese word for platinum)" and platinum are the synonyms, the cited invention should be found in accordance with the description in the cited document and considered in "comparison", the next process, to determine whether or not the common ground is found.

(iii) Selection of the cited invention to be compared

Assessment of whether or not an inventive step is found is made by comparing the claimed invention with a cited invention.

Then, the examiner selects as the cited invention to be compared with the claimed invention the cited invention easiest to be reasoned that a person skilled in the art would have easily arrived at the claimed invention based on the cited invention.

First, the cited invention that is most similar to or has less difference with the claimed invention is often selected as the cited invention to be compared with the claimed invention. Then the examiner attempts reasoning toward the fact that a person skilled in the art would have easily arrived at the claimed invention. If failing to make a convincing case, the examiner will repeat the task to attempt reasoning by selecting another prior art as the cited invention to be compared with the claimed invention.

(iv) Comparison

Next, the examiner finds the common ground and differences between the matter defining the claimed invention and the matter defining the cited invention to be compared.

The examiner finds the common ground and differences by considering each of the matters defining the claimed invention one by one to see the corresponding relationship with the matters defining the cited invention.

Where X, the matter defining the claimed invention, and X', the matter defining the cited invention, are virtually identical even if the expressions differ with each other, it is necessary to state the reason for that to deem the fact as a common ground.

Additionally, where A, B, and C are the matters defining the claimed invention while A, b, and D (here b is included in B) are the matters defining the cited invention to be compared, the common ground is A and B, while the difference is that the claimed invention has C as the defining matter while the cited invention has D as the defining matter.

On the other hand, where A, b, and C are the matters defining the claimed invention while A, B, and D (here b is included in B) are the matters defining the cited invention, the common ground is A. There are two points of difference; the first point of difference is that b is the matter defining the claimed invention while B is the matter defining the cited invention; the second point of difference is that C is the matter defining the claimed invention while D is the matter defining the cited invention.

(v) Reasoning

Based on the content and general technical knowledge of this cited invention and other cited inventions (including well-known and conventional arts), the examiner attempts to build a logic that can deny the inventive step of the claimed invention. If the reasoning is successful, the inventive step of the claimed invention is denied. If the reasoning fails, the inventive step of the claimed invention is not denied.

In other words, new inventions that have not been ruled as lacking inventive steps will be eligible for patent grant. It is not true that only those that are proved to involve an inventive step are allowed to be patented.

The examination guidelines state that the reasoning approach that can deny the fact that the claimed invention involves an inventive step is not limited to certain approaches, and that reasoning can be made from various and a wide range of aspects.

Such aspects will be interpreted one by one as follows:

3—5 Specific Examples of Reasoning

(1) Selection of an optimal material, workshop modification of design, mere juxtaposition of features

Whether or not the invention involves an inventive step is determined by whether or not it is possible to reason that a person skilled in the art would have easily arrived at the claimed invention based on the cited invention.

The first type of reasoning is to determine that a person skilled in the art would have easily arrived at the claimed invention based on the cited invention through exertion of his/her ordinary creative ability if the state of the art at the time of the filing of the application was considered after the differences between the claimed invention and the cited invention were identified. In terms of the type, it corresponds to the one that denies the inventive step of the claimed invention based on one single cited invention.

1) Selection of an optimal material, workshop modification of design, etc.

This means it is possible for a person skilled in the art to select an optimum material out of the materials publicly known as materials available for the cited invention (selection of the optimum material), to select the optimum value or range within the amount of composition or operation temperature range adoptable to the cited invention (making the numeric value range optimal or most suitable), or to change the design involved in the specific application of the art through exertion of the ordinary creative ability of a person skilled in the art even if the document that describes or suggests the optimum materials and favorable numeric value range is absent. Therefore, it is the reasoning that asserts that, where the difference is found only in such points, a person skilled in the art would have easily arrived at the invention unless any other ground is found for assuming the existence of an inventive step.

The “ground for assuming the existence of an inventive step” is, for example, an effect beyond the expectation of a person skilled in the art.

(Example of selecting an optimum material)

- Both the claimed invention and the cited invention are the invention of a paint that contains antioxidant; the difference between the two is that the claimed invention contains A as antioxidant.
- A is publicly known as an antioxidant for paint.
- In the cited invention, it is easy for a person skilled in the art to select on an experimental basis the optimum antioxidant A out of publicly known antioxidants.

(Example of making the numeric value range optimal or most suitable)

- Both the claimed invention and the cited invention are the invention of a paint that contains antioxidant; the difference between the two is that the claimed invention contains two (2) to three (3) percent of antioxidant A.
- B is publicly known as an antioxidant for paint. There is no particular restriction on the additive amount.
- In the cited invention, it could have been easy for a person skilled in the art to select the additive amount of antioxidant B on an experimental basis, and select the range of two (2) to three (3) percent.

(Example of design change)

- Both the claimed invention and the cited invention are the invention of an extruder; the difference between the two is the point that the claimed invention employs the means for heating called C.
- C is a well-known means for heating on various devices.
- In materializing the invention of the extruder in the cited invention, it could have been easy for a person skilled in the art to adopt C, a publicly known means for heating, as a means for heating various devices.

Example decisions:

[Example 1]

Sending or receiving with infrared waves of approximately 0.8-1.0 μm of infrared energy wavelength range is recognized as well-known art. Then, since there are no special circumstances that prevent to apply the technology to an apparatus for communicating their position of emergency vehicles, it is admitted that a person skilled in the art could have been easily arrived at the claimed invention by applying the technology for the communication of their positions of the cited invention 1.

(Reference: Hei 9 (Gyo Ke) 86)

[Example 2]

Using a cloth or paper, not reinforced, as a foundation material holding plants is well-known and commonly used in making pressed flowers. Therefore, in the case where it is unnecessary to use a reinforced cloth or paper, like a bendable absorbent plate of the cited invention, it is a mere workshop modification of design or easily made to try to use a cloth or paper absorbing calcium chloride, not reinforced, not only for a person skilled in the art, but also for anyone who tries to make pressed flowers.

(Reference: Hei 6 (Gyo Ke) 82, 83)

2) Mere juxtaposition of features

This reasoning asserts that where each of the matters for identifying the claimed invention is publicly known and the matters are not functionally related or not interacting with each other, thus causing no new effect through juxtaposition, the claimed invention is nothing more than a mere juxtaposition of publicly known matters and the invention could have easily been arrived at by a person skilled in the art so long as no other ground is found that can be assumed an inventive step.

(Example of mere juxtaposition)

- Both the claimed invention and the cited invention are the invention of a vehicle; the difference is found in the point where the claimed invention is equipped with lighting apparatus D and wiper apparatus E which are different from those of the cited invention.
- Lighting apparatus D and wiper apparatus E are both publicly known as being for vehicles.
- The lighting apparatus and the wiper are not functionally related or not interacting with each other as a part of a vehicle, and thus it could have been easy for a person skilled in the art to adopt a publicly known combination of lighting apparatus D and wiper apparatus E for vehicles for the vehicle of the cited invention, the combination of publicly known lighting apparatus D for vehicles and wiper apparatus E.

(Example decision)

[Example 1]

The remarkable working-effect which the plaintiffs assert is not deemed to be anything but a mere combination of expected effects of each publicly known art. Thus, the effect is not deemed to be a specific remarkable working-effect of the claimed invention.

(Reference: Sho 44 (Gyo Ke) 7)

(2) Probable cause or motivation

Determination of an inventive step is made based on whether or not reasoning can assert that a person skilled in the art could have easily arrived at the claimed invention based on the cited invention.

As the second type of reasoning, there is an approach to reason that a person skilled in the art could have easily arrived at the claimed invention by exerting his/her ordinary creative ability by applying the technical means of the second cited invention (hereafter "cited invention 2") to the cited invention compared with the claimed invention (hereafter "cited invention 1") after identifying the difference between the claimed invention and the cited invention. In terms of type, it corresponds to the approach for denying the inventive step of the claimed invention by presenting two or more cited inventions.

In this type, where the relationship between cited invention 1 and cited invention 2 is so close in terms of 1) the relation of the technical fields, 2) close similarity of a problem to be solved, 3) close similarity of function, work or operation, and 4) suggestions shown in the contents of cited inventions, the close relationship can be the motivation for a person skilled in the art to apply the technical means of cited invention 2 to cited invention 1.

Then, reasoning can be made asserting that a person skilled in the art would have easily arrived at the claimed invention based on the cited invention.

1) Close relation of technical fields

An attempt to apply a technical means in a related technical field in order to solve a problem is a mere exercise of ordinary creativity of a person skilled in the art.

Therefore, the fact that the technical fields of cited invention 1 and cited invention 2 are identical or closely related can be a motivation for applying the technical means of cited invention 2 to cited invention 1.

Even where the technical problems to be solved (purposes) of cited invention 1 and cited invention 2 may differ, the close relationship between both the technical fields may be a motivation to apply the technical means of cited invention 2 to cited invention 1.

(Case where the fields are identical in the broader concept)

Both a slot machine and a pachinko game machine are game machines and thus their technical fields are closely related. The fact that the both are game machines can be a motivation for applying the closing-release system of the pachinko game machine to the slot machine. (Refer to example decision 1 below.)

(Case of concurrent use)

A camera and an automatic strobe light are almost always used together and thus their technical fields are closely related.

The fact that the both are almost always used together can be a motivation for applying the incidence control element of a photometric circuit for the camera to a photometric circuit for the automatic strobe light. (Refer to example decision 2 below.)

(Case where the fields are identical)

A printing ink-withdrawing device and a printing ink-furnishing device belong to an identical technical field. The fact that the both belong to an identical technical field can be a motivation for applying the technical means of a convertible emitting/aspirating pump in the printing ink-furnishing device to the printing ink-withdrawing device. Then, since this technical means is nothing more than an extremely basic technical means, the fact that the specific technical problems to be solved (purposes) by both are not identical cannot be a ground for denying the easiness of applying the above-mentioned technical means. (Refer to example decision 3 below.)

(Example decisions)

[Example 1]

Although the closing-release system of the cited invention relates to a pachinko game machine not a slot machine, since both relate to amusement machines, and designed to stop after counting the given number, it is allowed that converting the said closing-release system of the pachinko game machine to the slot machine is easily arrived at regardless of the difference that the counted object is a pachinko-ball or medal. Whether the conversion is easy or not should be determined from the views of whether a person skilled in the art can easily conceive the idea of converting the technology to another field to which the relevant field of this technology is technically similar when the person skilled in the art develops the technology. Thus, it is admitted for a person skilled in the art to have easily conceived to convert the technology of the pachinko game machine to the field of the slot machine from the above-mentioned perspective.

(Reference: Hei 8 (Gyo Ke) 103)

[Example 2]

A camera and an automatic strobe light are always used together and are closely related. Therefore, applying the incidence control element of a photometric circuit for the camera to a photometric circuit for the automatic strobe light would have been easily made by a person skilled in the art, unless an outstanding structure is utilized in terms of the application.

(Reference: Sho 44 (Gyo Ke) 7)

[Example 3]

Since the cited invention 1 is related to a printing ink-withdrawing device of a printing machine for corrugated papers and the cited invention 2 is related to a furnishing device for high viscosity liquid like printing ink, the both inventions apparently belong to the same technical field. In the said judgment of

differences, a matter that should be applied from the cited invention 2 is merely an extremely basic technical means wherein a transmit pump is composed of an emitting/aspiration pump convertible to normal/reverse turn by connecting a drive motor of the transmit pump to a reverse control circuit. Consequently, the reason that specific technical problems (objectives) of both are not identical cannot be a ground to deny that the application of the technical means in the cited invention 2 to the cited invention 1 is very easy for a person skilled in the art.

(Reference: Hei 8 (Gyo Ke) 21)

2) Close similarity of a problem to be solved

It is exertion of the ordinary creative ability of a person skilled in the art to attempt, so as to solve the problems of the invention, the application of the technical means that solves identical problems.

Therefore, the fact that the problems to be solved of cited invention 1 and cited invention 2 are common can be a motivation for applying the technical means of cited invention 2 to cited invention 1.

(Case where the problems to be solved are identical)

Cited inventions 1 and 2 involve an identical technical problem in that a carrying sheet with labels temporarily attached at prescribed positions. Therefore, the fact that the problems of cited invention 1 and cited invention 2 are common can be a motivation for applying the technical means of cited invention 2 to cited invention 1. (Refer to example decision 1 below.)

(Example where attention is paid to the same problem to be solved)

None of the documents in which cited inventions 1 and 2 are described disclose any technical problem to be solved. However, it can easily be predicted that cited invention 1 is an invention having the technical problem of alternately using the blades of a rip saw with different thickness, and the holding means of the cited invention 2 can be recognized as being manufactured based on the technical idea of making the holding means available for various thickness of blades. Therefore, cited invention 1 and cited invention 2 have an identical technical problem to be solved.

The fact that the technical problems to be solved of cited invention 1 and cited invention 2 are common can be a motivation for applying the technical means of cited invention 2 to cited invention 1. (Refer to example decision 2 below.)

(Example decisions)

[Example 1]

The two inventions of cited documents 1 and 2 have the common problem to be solved in that a carrying sheet weakly attached with labels stops at a prescribed position. A person skilled in the art could have easily conceived the idea of applying the label feeding control means disclosed in the cited document 2 to the cited invention 1 for solving the technical problem.

(Reference: Hei 2 (Gyo Ke) 182)

[Example 2]

The thickness of a blade of a rip saw usually varies according to its length, and the technical problem itself of a blade changeable rip saw to use blades with changing their various thickness is easily predicted for a person skilled in the art who contacted the cited invention 1. Holding means in the cited inventions 4 to 7 can clearly hold various thickness of blades by their grasping force because of its elasticity. And the elements themselves are found to be manufactured on the basis of the technical idea of holding various thickness of blades in view of the structure itself. Therefore, the technical idea in the cited inventions 4 to 7 has a common technical problem with the concerned device on the point of using with changing blades with their various thickness. Thus, it should be said that a person skilled in the art can very easily arrived at conversion of the elements of the cited inventions 4 to 7 to the elements of the rip saw blade in the cited invention 1.

(Reference Hei 7 (Gyo Ke) 5)

[How to consider cases where the problem to be solved differs between the claimed invention and the cited invention]

Normally, the cited invention to be compared with the claimed invention is an invention for solving the technical problem similar to that of the claimed invention.

Generally, where an invention having a different technical problem to be solved than that of the claimed invention is adopted as the cited invention to be compared, it will be difficult to reason that a person skilled in the art would have easily arrived at the claimed invention based on the cited invention, since the technical problem to be solved, in other words the objective of the research and development, is not identical.

Where it was impossible to find any appropriate cited invention having a technical problem similar to that of the claimed invention, the examiner further attempts to devise reasoning that can deny the inventive step of the claimed invention from the following aspects:

(a) Obviousness and ease of conception of the technical problem to be solved addressed by the claimed invention

Where the technical problem of the claimed invention is of a general nature and it is obvious or a person skilled in the art can easily conceive that the problem should be solved also in the cited invention, the cited invention should be considered as to whether or not a person skilled in the art would have easily arrived at the claimed invention based on the said problem.

(Example where the technical problem is an obvious one)

The technical problem "to save costs and space" of the claimed invention is nothing but an evident problem in the light of the structure of the device. Cited inventions 1 and 2 are both the invention of a device and thus it is obvious that they have the technical problem "to save costs and space". Then, in order to solve the problem "to save costs and space" in the device of cited invention 1, a person skilled in the art would have easily conceived of adopting the technical means described in cited invention 2 that can solve the said problem. (Refer to example decision 1 below.)

(Example decisions)

[Example 1]

The problem "to save costs and space" of the claimed invention concerned is a general problem not only of a mixer but of every device. In other words, it is nothing but an evident problem in the light of the structure of the device. Then, it is easily conceived to adopt above axial speed reducer and speed reducer with motors described in the cited invention 4 in order to save the occupied space of the mixer of the cited invention 1 according to the said evident problem, in consideration of both the said problem and the said properties of an axial speed reducer and a speed reducer with motors. Thus, it cannot be said that there is a special difficulty to do that.

(Reference Hei 4 (Gyo Ke) 142)

[Example 2]

A cited invention 4 clearly indicates that "light-weighted" is one of the important properties required for a golf club shaft, and suggests the needs or the advantages of lightning a golf club shaft in relation to drive of golf balls. Thus, it is allowed that a problem of the claimed device to lighten a golf club shaft is the matter which a person skilled in the art can predict as a matter of course.

(Reference Hei 7 (Gyo Ke) 152)

(b) Reasoning that it was easy to arrive at a structure similar to that of the claimed invention through a different way of thinking

Where it was reasoned that a person skilled in the art would have easily arrived at a structure similar to that of the claimed invention through a different way of thinking even if the cited invention to be compared with the claimed invention has a different technical problem, the inventive step of the claimed invention can be denied regardless of the difference in problems.

(Example of a different way of thinking)

The claimed invention is a carbon disk brake provided with grooves to drain water on its face. On the other hand, a person skilled in the art could have easily provided carbon disk brakes of cited invention 1 with grooves to remove dust on the face.

Then the claimed invention has no inventive step because a person skilled in the art could have arrived at a structure identical to that of the claimed invention (carbon disk brakes with grooves) based on the carbon disk brakes of cited invention 1. (Refer to example decision 2 below.)

(Example decision)

[Example 1]

The claimed invention is a carbon disk brake with grooves to drain water on its face. The cited document 1 discloses a carbon disk brake. The cited document 2 discloses a metal disk brake with grooves to remove dust on its face.

In this case, it is clear that dust on the face prevents the brake even for the carbon disk brake disclosed in the cited document 1 in the light of the general function of the brake. To provide a carbon disk brake with

grooves to solve the problem suggested in the cited document 2 is a technical improvement which a person skilled in the art could have easily arrived at. Consequently, the same structure as the claimed invention in obtained, so that the claimed invention involves no inventive step.

(Reference: 201USPQ658)

3) Close similarity of function, work or operation

It is ordinary exertion of a person skilled in the art to attempt to apply a technical means having the same operation or function in order to solve the problem of the invention

Therefore, the close similarity in function, work, or operation can be a motivation for applying the technical means of cited invention 2 to cited invention 1.

(Example of identical work or operation)

Both the cam structure of cited invention 1 and the expansion structure of cited invention 2 are provided for the same action to attach and detach the cloth to and from the cylinder. The close similarity in work or operation can be a motivation for applying the technical means of cited invention 2 to cited invention 1.

(Refer to example decision 1 below.)

(Example decision)

[Example 1]

Both cited invention 1 and cited invention 2 are common in respect of washing cylinders of the printing machine by pressing a cloth on it. There is no difference between the cam structure of cited invention 1 and the expansion structure of cited invention 2, in respect of that the cloth is placed for attaching to or detaching from the cylinder. Then, it could be argued that there is a background of conversion of the expansion structure of cited invention 2 in place of the cam structure of cited invention 1 as a pressure means.

(Reference Hei 8 (Gyo Ke) 262)

4) Suggestions shown in the contents of cited inventions

Where the cited document has the description that suggests possible application of cited invention 2 to cited invention 1, this description can be a motivation for applying the technical means of cited invention 2 to cited invention 1.

(Example suggestion)

- Both the claimed invention and cited invention 1 are the invention of paint that contains antioxidant, and the difference between the two is that the claimed invention contains A as antioxidant.
- Cited document 2 concretely states that chemical compound A acts as antioxidant, and thus the invention of antioxidant A (cited invention 2) can be found. Cited document 2 further states that chemical compound A is expected to be used as antioxidant for various industrial products.
- The description in cited document 2 “expected to be used as antioxidant for various industrial products” can be a motivation for applying cited invention 2 to cited invention 1.

(Example decisions)

[Example 1]

The cited document discloses the condition of metal ions of which the electric potential is higher than that of iron as a cation suitable for the objective similar to the claimed invention of obtaining an aqueous cationic electrodepositing bath, in which chemical pretreatment is unnecessary, and concretely exemplifies seven types of metal ions.

Although lead ions are not exemplified, which are the specific compositions of the claimed invention, it is a publicly known fact that the electric potential of lead is higher than that of iron, so that it is allowed that the suggestion to use lead ions is disclosed in the cited document.

Thus, adding lead ions to the electrodepositing bath can be easily conceived by a person skilled in the art, insofar as there are no conditions such as the unsuitability of using lead to achieve the objective of the claimed invention.

(Reference: Sho 61 (Gyo Ke) 240)

[Example 2]

The 3-chloro compound of the claimed invention merely differs in the substitution position in the chemical formula from the 2-chloro compound and 4-chloro compound in the cited document. And there is no notation in the cited document that the chemical compound should restrict the substitution position to the specific positions in order to be used as a color brightener, the 3-chloro compound can be considered as being suggested in the cited document in the light of the above. Thus, the brightener can be easily predicted by a person skilled in the art.

(Reference: Sho 51 (Gyo Ke) 19)

(3) Advantageous effects

Inventive step should be determined based on whether or not it is reasonably possible to assert that a person skilled in the art would have easily arrived at the claimed invention based on the cited invention.

Here, "would have easily arrived at the claimed invention" means that, to be concrete, the structure of the claimed invention could have been arrived at.

In the field where the effect of the claimed invention is easily predictable from the structure or, for example, in the field of machinery, to select a certain structure and the effect to be obtained are inextricably linked. Therefore, in determination of whether or not the structure of the claimed invention could have easily been arrived at, the effect caused by the claimed invention is seldom considered because it is regarded as a viewpoint different from the consideration of whether or not the structure is easy to conceive.

However, where it can definitely be comprehended from the description in the statement, etc., that the claimed invention causes an effect more advantageous than that of the cited invention in the field where the effect of the claimed invention is hard to predict from the structure or, for example, in the field of chemistry, this more advantageous effect is deemed as a useful fact for positively assuming the existence of an inventive step and taken into consideration. Here, the effect more advantageous compared with that of the cited invention refers to the one out of the effects caused by the matters for identifying the claimed invention that is more advantageous compared with the effect of the cited invention.

1) Advantageous effects to be considered

Where the claimed invention has an effect more advantageous than that of the cited invention, the examiner takes this into consideration and attempts to reason that a person skilled in the art could have easily arrived at the claimed invention.

Then, if it is fully possible to reason that a person skilled in the art could have easily arrived at the claimed invention even though the claimed invention has an effect more advantageous than that of the cited invention, the inventive step will be denied.

(a) Case where the inventive step is denied

Where the effect caused by the claimed invention which is more advantageous compared with that of the cited invention is within the range predictable from the state of the art, the effect cannot be a fact useful for positively assuming the existence of the inventive step of the claimed invention.

(Example where the effect is within the predicted range)

Even though the laminated material of the claimed invention which uses polypropylene resin has properties, in terms of strength and other factors, superior to those of the cited invention using polyethylene resin, this is of a degree that could be predicted by a person skilled in the art based on the difference of the properties of polyethylene and polypropylene resins and thus does not affect the determination on inventive step. (Refer to Example decision 1 below.)

(Example decisions)

[Example 1]

Even though the laminated material manufactured by the claimed invention has slightly superior property compared to the conventional material in strength and other factors, the result was achieved through selecting polypropylene resin in place of polyethylene resin according to a selection that a person skilled in the art would have easily conceived. Thus, it does not affect the determination with regard to the inventive step.

(Reference: Sho 37 (Gyo Na) 199)

[Example 2]

Adapting a silicon carbide as the material in the semiconductor region on the light-irradiated side of the semiconductor layers in the photoelectric conversion semiconductor device would have been easy from the viewpoint of minimizing light absorption in the said region. Thus, the finding that adopting a silicon carbide would have been easy is not affected even though the semiconductor region has the effect of preventing i-type property deterioration in the second semiconductor region.

(Reference: Sho 63 (Gyo Ke) 282)

(b) Case where the inventive step is affirmed

In the field where the effect of the claimed invention is difficult to predict due to its structure, or, for example, in the field of chemistry, some invention may be discovered that causes an effect beyond the

prediction of a person skilled in the art in the course of making many samples and repeating the effect test. Patent applications are often made based on such knowledge and information.

The inventive step of the claimed invention may not be denied if the more advantageous effect compared to that of the cited invention is distinguished enough to exceed the range predicted from the state of the art.

Where, for example, the claimed invention has an effect more advantageous compared to that of the cited invention and different from that of the cited invention even though the structures of the cited invention and the claimed invention appear similar or, seemingly, a person skilled in the art could easily have arrived at the invention through a combination of two or more cited inventions, or where the claimed invention has a similar effect but which is remarkably superior and this could not be predicted by a person skilled in the art from the state of the art, the involvement of the inventive step can be assumed from this fact.

(Example of an unpredictable distinguished effect)

Since the effect of the motilin of the claimed invention is extremely superior compared with the motilin of the cited invention and is so distinguished as to exceed the range predicted from the then state of the art, the claimed invention involves an inventive step. (Refer to Example decision 1 below.)

(Example decisions)

[Example 1]

It is possible to be allowed that producing motilin derivative like the claimed invention on the basis of the cited invention could be easily conceived by a person skilled in the art. However, even though the motilin of the claimed invention has an effect of the same quality as the motilin of the cited invention, it is appropriate to understand that the invention could be granted a patent as involving an inventive step if the motilin of the invention has an extremely excellent effect and if the effect is so remarkable that it cannot be foreseen by a person skilled in the art from the state of the art at the time of filing.

(Reference: Hei 8 (Gyo Ke) 136)

[Example 2]

The effect of the claimed invention is not derived until combining each of the constituent features, and is remarkable. Thus, the constituent features cannot have been easily conceived, although each of the constituent features are disclosed in each of the cited documents.

(Reference: Sho 44 (Gyo Ke) 107)

2) Effects to be considered, asserted in a written argument, etc.

The examiner may, in the course of examination, indicate the reason for refusal which asserts that a person skilled in the art could have easily made the claimed invention based on the cited invention.

In responding to this, the applicant will submit experimental results to assert that the effect caused by the claimed invention is distinguished enough to exceed the prediction of a person skilled in the art compared to the effect caused by the cited invention presented by the examiner.

In such a case where the effect is more advantageous than that of the cited invention described in the statement, and where the effect is more advantageous than that of the cited invention is not specified in the

statement but a person skilled in the art could have assumed from the description in the statement or drawing an effect more advantageous compared with the cited invention, the effect asserted and attested (e.g., experimental results) in a written argument, etc., will be taken into consideration in determination of inventive step. However, effects that are not described in the statement and a person skilled in the art would not have assumed from the description in the statement or drawings will not be taken into consideration in determination of inventive step, even though the effects have been asserted and attested in a written argument, etc.

(Example where the effect is taken into consideration)

The claimed invention is the invention of an antipyretic. The statement prepared upon application shows in pharmacological data that the antipyretic is superior in fever reducing effect compared with a publicly known antipyretic.

The examiner indicated his/her view by citing another publicly known antipyretic that the claimed invention involves no inventive step. In responding against this, the applicant obtained pharmacological data that shows the antipyretic effect of the antipyretic of the claimed invention and that cited by the examiner through the pharmacological test method described in the statement of the claimed invention, presented the data in a written argument, and asserted that the antipyretic effect of the antipyretic of the claimed invention is distinguished by exceeding the prediction of a person skilled in the art, even if it is compared with the antipyretic cited by the examiner.

The effect asserted and attested by this written argument will be taken into consideration in determination of inventive step.

(Example where the effect is not taken into consideration)

The claimed invention is the invention of an antipyretic. The statement prepared upon application shows in pharmacological data that the antipyretic is superior in fever reducing effect compared with a publicly known antipyretic. Nothing was stated regarding the stability of the antipyretic in long-term storage.

The examiner indicated his/her view, by citing another publicly known antipyretic, that the claimed invention involves no inventive step. In responding against this, the applicant tested the long-term storage stability of the antipyretics of the claimed invention and the one cited by the examiner, and indicated the test results of the stability test in a written argument to assert that the antipyretic of the claimed invention has a distinguished effect exceeding the prediction of a person skilled in the art in the long-term storage stability compared with the antipyretic cited by the examiner.

The effect asserted and attested by this written argument will not be taken into consideration in determination of inventive step.

3) Method of handling selection invention

(i) Definition of "selection invention"

Where an invention with a generic concept is expressed in a cited reference, an invention with more specific concept selected from the generic concept is called "selection invention," if it is novel over the generic invention and pertains to a technical field in which an effect of a product is difficult to understand

from its structure. Where an invention is expressed as alternatives either in form or de facto in a cited reference, an invention selected from a group of inventions each of which is identified by supposing that each of the alternatives is a matter to define each of such inventions is also called "selection invention," if it is novel over the alternatives and pertains to a technical field in which an effect of a product is difficult to understand from its structure.

(ii) Inventive step of the selection invention

A selection invention involves an inventive step, when it generates an advantageous effect, not disclosed in a cited reference, qualitatively different or qualitatively the same but quantitatively prominent in comparison with that of an invention with a generic concept in a cited invention, neither of the effect being foreseen by a person skilled in the art from the state of the art.

(Example of a case involving an inventive step)

- The claimed invention is the invention of an insecticide consisting of chemical compound x.
- The cited invention is the invention of an insecticide consisting of chemical compound given in generic formula (I). Chemical compound x is a chemical compound included in generic formula (I), but is not stated in the cited document.
- The claimed invention shows a distinguished insect killing effect exceeding the prediction of a person skilled in the art compared with the insecticide consisting of chemical compounds y and z specifically described in the cited document.
- The claimed invention involves an inventive step.

(Refer to Example decision 1 below.)

(Example decisions)

[Example 1]

It was publicly known that a chemical compound expressed with generic formula has the property of insecticide. While a specific compound is included in the generic formula, but was not specifically publicly known with respect to the property of insecticide, the claimed invention selected the specific compound as an effective component in the insecticide, on the basis of the discovery that the toxicity to humans of the specific compound is remarkably less than the other compounds in the generic formula. And, there is no other evidence which makes this expectation possible.

[Example 2]

Even though the claimed invention has a more excellent working effect in chroma than the cited invention, the difference of the effect is nothing more than successively transition from the working effect of the cited invention and could not be a remarkable effect that exceeds the prediction of a person skilled in the art. Thus, the claimed invention could not form a selection invention.

(Reference Hei 4 (Gyo Ke) 214)

4) Method of handling invention with numerical limitation

As for the so-called invention defined by a numerical limitation which is a numerical expression of the matter for identifying the invention using the numerical range, it is the exertion of the ordinary creative ability of a person skilled in the art to optimize the numerical range by experiment, and thus it can normally be considered that no inventive step exists.

However, where the claimed invention has more advantageous effects that are not described in printed publications and different from those of the invention described in printed publications or extremely superior although they are of the same nature, and where such effects are not those that could be predicted by a person skilled in the art due to the state of the art, the claimed invention has an inventive step.

Additionally, the advantageous effects must be distinguished in all parts of the numerical range. (Refer to Example decision 1 below.)

Furthermore, where the claimed invention is an extension of the cited invention, or, in other words, the two inventions differ only in whether or not they have numerical limitation and share an identical problem to be solved, it is required that the quantity should be remarkably different inside and outside the numerical limitation. (Refer to Example decision 2 below.)

However, where the technical problems to be solved are different and the advantageous effects are of different natures, numerical limitation requires no critical significance even though both have identical matters for identifying the inventions except for numerical limitation.

(Example decisions)

[Example 1]

The claimed invention is not found to have remarkable effect under reaction conditions within a range of at least from 350 to about 500°C, within the range of reaction temperature of 350 to 1,200°C which the claimed invention claims as its requirement.

(Reference: Sho 54 (Gyo Ke) 114)

[Example 2]

"Including more than 90% of P-section size within 100-14 mesh" in the claimed invention is extremely numerically approximate to 50-12 mesh of P-section size desirable in the cited invention and there are no particular differences in the working effect. Thus, if it can be said that a person skilled in the art could arrive at the limitation of P-section size on the basis of the cited invention without special creativity, the claimed invention should be deemed to be easily made on the basis of the cited invention and well-known art by a person skilled in the art.

(Reference Sho 63 (Gyo Ke) 107)

3—6 Handling of a Claim with Statements Defining a Product by its Function or Characteristic, etc.

(1) Reason to suspect prima facie identicalness

An invention of a claim including a description that identifies a product by function and properties, etc., identified by so-called specific parameters which are not the normally used physical properties, etc., may sometimes be difficult to compare with the cited invention. In such a case, if inventive steps are uniformly

recognized on the ground that reasoning for denial cannot be made, it may happen that a publicly known product is determined as involving an inventive step due to identification using specific parameters.

Therefore, in cases where comparison with the cited invention is difficult, they shall be handled as follows: (Additionally, the ordinary procedure shall be followed where determination of inventive step can be made without using this exceptional one.)

- (i) Where the examiner has a reason to suspect prima facie identicalness, without making strict comparison of the claimed invention and the cited invention, that the inventive step of the claimed invention was denied because the product of the claimed invention and the product of the cited invention are similar, the examiner will send the reason for rejection indicating that inventive step was denied.
- (ii) Where the applicant argued or clarified through a written argument and experimental results, etc., and countered the suspicion of prima facie identicalness meaning that the inventive step of the claimed invention should be denied because the products of both the inventions are similar, and thus succeeded in removing the examiner's doubts, the reason for refusal will be cancelled.
- (iii) Where no change occurred to the examiner's conviction because the argument and clarification by the applicant appeared abstract and general, the examiner makes a decision of final refusal.

However, this handling must not be applied to cases where an invention that the identified matters of whose cited invention correspond to (1) or (2) below is deemed as a cited invention.

Additionally, the specific parameters hereby referred to correspond to (1) or (2) below:

- 1) a case where the function or characteristic, etc. is neither standard, commonly used by a person skilled in the art in the relevant technical field nor comprehensible of its relation to a commonly used function or characteristic, etc to a person skilled in the art if the function or characteristic is not commonly used; or
 - 2) a case where plural of functions or characteristics, etc. each of which is either standard, commonly used by a person skilled in the art in the relevant technical field or comprehensible of its relation to a commonly used function or characteristic, etc. to a person skilled in the art if the function or characteristic is not commonly used, are combined in a claim so that the claim statements as a whole fall under 1).
- (2) Example of a specific case of reasoning for suspecting prima facie identicalness
- (s)he reveals that a product of a cited invention deemed to be a ground for denying an inventive step for a claimed invention as a result of the converting the function or characteristic, etc. into a different definition with the same meaning or a different method for testing or measuring the same;
 - where the claimed invention and the cited invention are identified by identical or similar functions and properties, etc. but their measurement condition or assessment method differ from each other and where a certain relationship exists between the two and if the functions and properties, etc. of the cited invention is measured under or assessed by the measurement condition or assessment method of the claimed invention, it will be highly possible that they will become similar to the functions and properties, etc. of the claimed invention and thus will be ground for denying inventive step.

- a product of the claimed invention has been revealed identical in structure with a certain product after the filing and (s)he discovers the particular product could be made on the basis of inventions publicly known prior to the filing of the application;
- (s)he discovers a product of a cited invention which is identical with or similar to a mode for carrying out a claimed invention and which can be a ground for denying an inventive step of the claimed invention (for example, (s)he discovers a cited invention of which starting material is similar to one of the mode for carrying out the claimed invention and of which manufacturing process is identical with one of the mode for carrying out the claimed invention, or (s)he discovers a cited invention of which starting material is identical with one of the mode for carrying out the claimed invention and of which manufacturing process is similar to one of the mode for carrying out the claimed invention, etc.); and
- the matters defining a claimed invention are identical with those defining a cited invention except the ones defining the claimed invention by its function or characteristic, etc., or have no inventive step, and the cited invention has the objective or effect identical with or similar to the one which the claim statements of the claimed invention defining a product by its function or characteristic, etc., and the cited invention can be a ground for denying an inventive step of the claimed invention.

3—7 Handling of a Claim with Statements Defining a Product by Its Manufacturing Process

(1) Reason for suspecting prima facie identicalness

If a claim is one with statements defining a product by its manufacturing process, there may be cases where it is difficult to determine what is the product per se structurally. In such circumstances, if the examiner has a reason to suspect that the claimed product would be prima facie identical with the product of the cited invention and that the claimed invention would prima facie involve no inventive step without making a strict comparison of the claimed product with the product of the cited invention, the examiner may send the notice of reasons for refusal under Article 29(2) as mentioned in the above 3.6.

The above-mentioned handling, however, shall not be applied, if matters defining the cited invention include statements defining a product by its manufacturing process.

Additionally, the ordinary procedure should be followed where inventive step can be determined without using this exceptional procedure.

(2) Example of a specific case of reasoning for suspecting prima facie identicalness

- (s)he discovers a product of a cited invention of which starting material is similar to and of which manufacturing process is identical with those of the product of the claimed invention;
- (s)he discovers a product of a cited invention of which starting material is identical with and of which manufacturing process is similar to those of the product of the claimed invention;
- a product of the claimed invention has been revealed identical in structure with a certain product after the filing, and (s)he discovers the particular product could be made on the basis of inventions publicly known prior to the filing of the application; and
- (s)he discovers a cited invention which could deny an inventive step of what is identical with or similar to a mode for carrying out the claimed invention.

3—8 Notes to Determination of whether a Claimed Invention Involves an Inventive Step

(1) Reason for inhibition

When there is such a description in a cited reference that precludes the reasoning the claimed invention is easily arrived at, the cited reference is not eligible for a cited invention. However, regardless of the description in a cited reference such as the difference of the problem to be solved, which prima facie precludes the reasoning, the eligibility for a cited invention shall be maintained, if the reasoning could be possible in terms of other aspects such as a close relation of technical fields or close similarity of function, work or operation, etc.

(Example decisions)

[Example 1]

While the claimed invention uses carbon dioxide which accompanies decomposition of magnesium carbonate, the disclosure of the cited document denies its use. Thus, It cannot be provided as a material for comparison.

(Reference: Sho 62 (Gyo Ke) 155)

[Example 2]

The cited invention 1 is an attachment device of a transformer with the aim of thinning down by devising the way of setup of the terminal pins. If the constitution of the cited invention 2 was applied to the terminal pins of the cited invention 1, it would be a modification of the terminal pins contrary to the aim of the contrivance which intends to thin down with an effort by devising the way of setup with establishing of a by-pass port. Thus, it is not allowed that a person skilled in the art could have easily arrived at the claimed invention in the light of the similarity that the both inventions can be attached to the plane.

(Reference Hei 8 (Gyo Ke) 91; an example of which the inventive step is admitted in the light of obstructing factors)

[Example 3]

When the technical idea, which is to carry out the two operations selectively by one robot by means of putting two holding means with respective functions into one robot indicated in the cited inventions 2 and 3, is applied to cited invention 1, the said auto-packing device could not be an obstacle.

(Reference Hei 10 (Gyo Ke) 131; an example where an existence of obstructing factors is denied)

[Example 4]

There is no fault in the judgment of appeal that is "generally speaking, it is commonly used that adding inert solvent properly and adjusting viscosity, etc. according to coating means or condition, etc. in this kind of coating compositions. In addition, since it could not be said that there are special technical obstructions to use an inert solvent in the cited invention, it can be said that a person skilled in the art could have easily arrived at using an inert solvent together in the cited invention."

(Reference Hei 9 (Gyo Ke) 111; an example where an existence of obstructing factors is denied)

(2) Well-known and commonly used art

Since well-known or commonly used art is important material constituting the state of the art which can be a ground for a notice of reasons for refusal, well-known or commonly used art should be accompanied with an exemplary document insofar as possible except when it is so well-known that any evidential document seems unnecessary, regardless of whether it is used as a basis to find the cited invention or to find the knowledge (the state of the art including the common general knowledge) or the ability (the ability to use ordinary technical means for research and development or the ordinary creativity) of a person skilled in the art if an examiner refers to well-known or commonly used art.

(3) Conventional art

If an applicant admits in a specification that a technology presented as prior art is publicly known prior to the filing of the application, the technology may be properly cited as the state of the art at the time of filing, in determining inventive step of a claimed invention.

(4) Formal or factual options

If matters defining a claimed invention are expressed by alternatives either in form or de facto, the examiner compares a cited invention with a group of inventions each of which is identified by supposing that each of the alternatives is a matter to define each of such inventions, and attempts to make a reasoning to deny inventive step of such inventions. If the reasoning can be properly made as this result, the claimed invention as a whole shall be deemed as lacking an inventive step.

This handling does not relate to the practice in deciding the appropriate time to stop prior art searches.

(5) Product and its manufacturing method

Where an invention of a product per se involves an inventive step, inventions of a process of producing the product or of a use of the product involves an inventive step in principle.

(6) Commercial success

A commercial success or other similar facts can be taken into consideration in order to support to affirmatively infer an inventive step, insofar as the examiner finds that the fact is established by the features of a claimed invention, not by any other factors such as sales promotion technique and advertisement through an applicant's legitimate assertion or substantiation.

(Example decisions)

[Example 1]

It should be said that the idea of using said remaining gas of oil factory that consists of composition like the claimed invention is absolutely different from the cited invention, and a person skilled in the art cannot easily arrive at that. Since the claimed invention apparently provides the economic effects that are provision of materials in extremely low cost and effective use of wastes by using remaining exhaust gas of oil factory, and the effect could be evaluated remarkable, the claimed invention is not allowed to be what a person skilled in the art could have easily made on the basis of the cited invention.

(Reference: Hei 1 (Gyo Ke) 180)

[Example 2]

Commercial success of a working goods of the claimed invention, as in the assertion of the plaintiff, does not affect the predictability of a working effect.

(Reference: Hei 8 (Gyo Ke) 193)

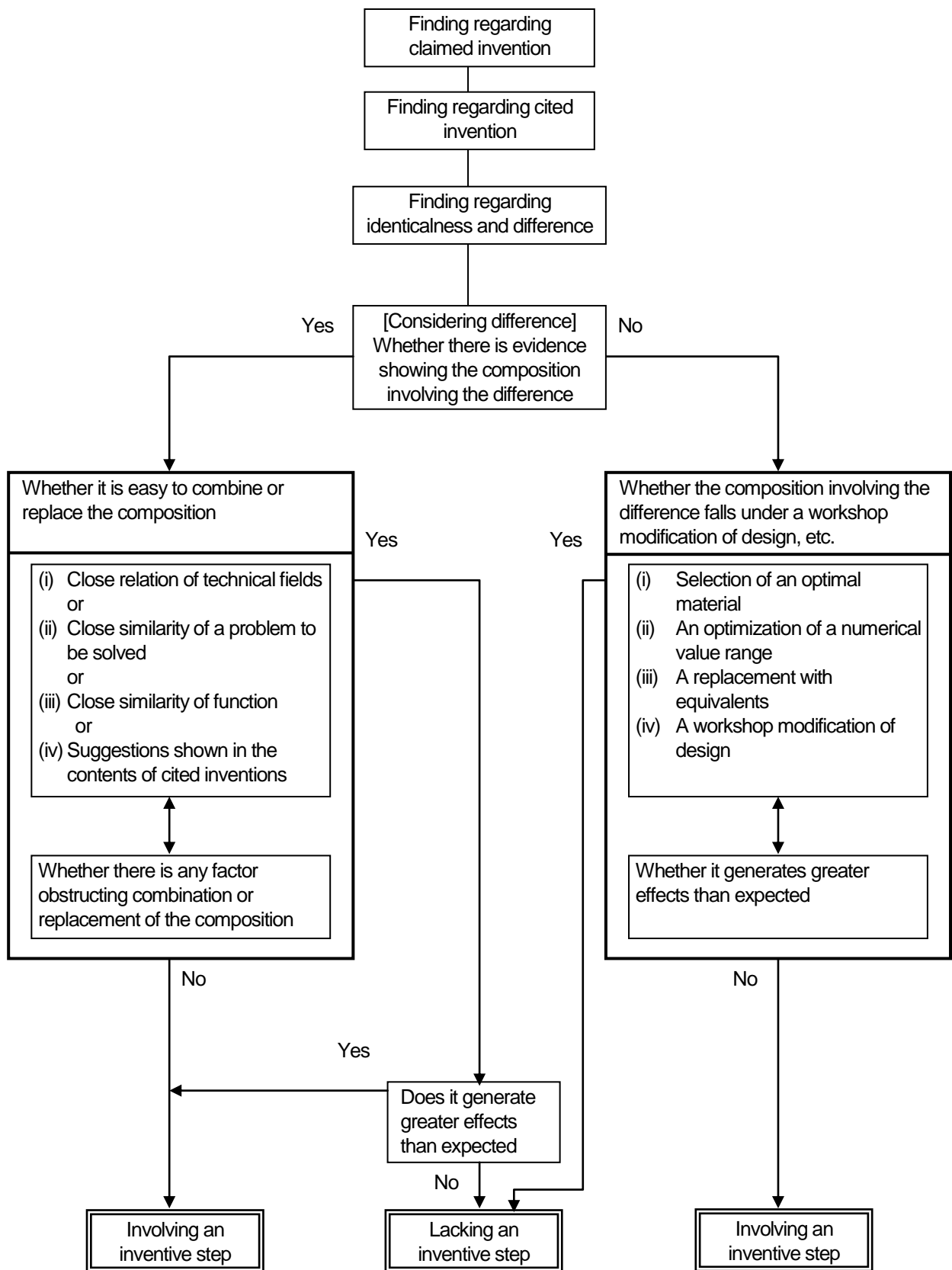
3—9 Notice of Reasons for Refusal under the provision of Patent Act Article 29(2)

If the examiner has a conviction that a claimed invention is unpatentable under Article 29 (2), (s)he will send a notice of reasons for refusal to an applicant.

The applicant may argue or clarify by putting forth a written argument or a certificate of experimental results, etc. against the notice of reasons for refusal.

The reason for refusal is to be dissolved if the applicant's argument succeeds in changing the examiner's evaluation at least to the extent that it is unclear that the claimed invention is unpatentable under Article 29(2). Where the applicant's argument does not change the examiner's evaluation to that extent, the examiner may make a decision of refusal on the ground of the reason for refusal for lacking an inventive step.

Example: Method of Determining Inventive Step



Source: Modified flowchart from JPO Examination Department's "FY2006 Report on Inventive Step Review"

[Virtual case of the procedure for determining inventive step]

Finding of the claimed invention:

- “(1) a motorcycle tire
(2) which has the outer circumferential surface formed of rubber a, and
(3) a groove having U-shaped cross section that intersects with BB at an acute angle on the afore-mentioned circumferential surface”

Finding of the cited invention:

- “a. a motorcycle tire
b. having the preferential surface formed of rubber A
c. with a groove having the cross section of semicircular shape that intersects with BB at an angle of 30 to 40 degrees on the afore-mentioned outer circumferential surface”

Comparison: finding identicalness and difference:

Relationship among the matters defining the claimed invention

- Rubber a of the claimed invention is the subordinate concept of rubber A of the cited invention.
- "Intersects at an acute angle" of the claimed invention includes "intersects at an angle of 30 to 40 degrees" of the cited invention.
- The motorbike of the claimed invention refers to the motorcycle of the cited invention.

Therefore, the identicalness and the difference between the claimed invention and the cited invention are as follows:

Identicalness

Both are a tire for vehicles having the preferential surface formed of rubber with a groove on the afore-mentioned preferential surface that intersects with BB at an acute angle.

Difference

1. Rubber a is used in the claimed invention while rubber A is used in the cited invention.
2. The groove is of U-shaped in the claimed invention while it is of semicircle in the cited invention.

Reasoning: Consideration on the difference:

Difference 1

Rubber a is well known as the rubber for tires...

Difference 2

The difference between the U-shaped groove and the semicircle groove is nothing but whether or not the invention has a straight line formed at the entrance of the groove, and...

Conclusion:

Therefore, the claimed invention could have been made by a person skilled in the art based on the cited invention.